DOCUMENT RESUME

ED 224 499 IR 050 040

TITLE	A Report to the Florida Legislature on Developing a Florida Information Resource Network (FIRN).
INSTITUTION	Florida State Dept. of Education, Tallahassee.
PUB DATE	Jan 82
NOTE	93p.
PUB TYPE	Legal/Legislative/Regulatory Materials (090) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Charts; Computers; Databases; *Data Collection; Diagrams; Elementary Secondary Education; Government School Relationship; *Information Networks; Management Information Systems; Online Systems; Program Development; Public Schools; *Recordkeeping; *School Districts; State Aid; *State Departments of Education; State Programs; Telecommunications
IDENTIFIERS	*Computer Networks; Education Data Elements Dictionary; *Florida Information Resource Network

ABSTRACT

In response to a legislative proviso, this project report presents an introductory development plan for the Florida Information Resource Network (FIRN), which is designed to connect Florida's public schools, school districts, Department of Education (DOE), and Legislature as part of a statewide online interactive educational data retrieval and reporting system. Major sections of the report discuss legislative and DOE activities related to FIRN, current and future levels of functional computing capability in Florida's educational system, and 5-phase FIRN implementation program, and FIRN's anticipated costs. The timing of implementation phases; advisory, policy and staff considerations; security and privacy issues; and proposed methods of evaluation are briefly described. A technical summary of hardware, software, and system configurations in different FIRN implementation stages is provided. Appendices contain diagrams of the management information system model used by Florida's educational information community, and the hierarchy of that community; a list of current computing capabilities of the individual Florida school districts; a draft data element dictionary for FIRN including student, program, staff, and finance elements; and two documents related to available computer network technology and DOE approval of school district data collection activities. A list of FIRN benefits and a glossary are included. (ESR)

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A Report To The Florida Legislature

On Developing A

FLORIDA INFORMATION RESOURCE NETWORK (FIRN)

January, 1982

IR050040

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FLORIDA INFORMATION RESOURCE NETWORK PLAN

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B E N E F I T S

The Florida Information Resource Network (FIRN) will provide many benefits, present and future. Some of these include:

Teacher Data Burden Reduction - promoting the reduction of teacher paperwork through the use of computer hardware and software at district and school levels for activities such as student record keeping, grade reporting and attendance reporting.

Automated Reporting - enabling the transmission of information from the State to the school districts/schools and vice versa.

Record Keeping - storing student records one time in machine readable format enabling the transfer of information from one institution to another, i.e., school to school, district to district, district to community college, district to university or community college to university.

Instructional Computing - establishing the foundation for the integration of administrative and instructional computing to support activities such as Computer Managed Instruction (CMI). Also, making the network available for file to file transfers and down-line loading in support of Computer Assisted Instruction (CAI) and Computer Science courses.

Accuracy and Timeliness - improving accuracy and timeliness of information at all levels within the state-wide educational system.

Automated Procedures - increasing automated user functional procedures at district and school levels thereby providing greater efficiency in the handling of student/program, staff, finance, facility and community information.

Resource Sharing - providing a vehicle for the sharing of data processing resources (people, hardware and software) among school districts, community colleges and universities.

Equitable Access - enabling more equitable access to functional computing (computer hardware, systems software and applications software), regardless of the size of the school district.

Cost Reduction - furnishing modern telecommunication technology as a hedge against the ever increasing costs of conventional data communication methods.

Innovative System - making a working telecommunication prototype available as a model for use by other governmental agencies.

Non-Data Processing Co-op Model - establishing a model for educational entities to share non-data processing resources, such as, audio visual, in-service training and group purchases.

Electronic Mail - providing the potential for greatly improving the speed at which correspondence travels from one educational entity to another and reducing the cost associated with this document transfer.

ACKNOWLEDGEMENTS

The Council greatly appreciates the opportunity extended by the Florida Legislature for it to prepare and submit this plan for a Florida Information Resource Network.

The Council would also like to recognize the following individuals and committees for the cooperation, dedication and support which they displayed to make this plan a reality in a relatively short period of time:

Consultant to the Council for coordination and writing of the Florida Information Resource (FIRN) Plan;

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ACKNOWLEDGMENTS (continued)

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I. INTRODUCTION

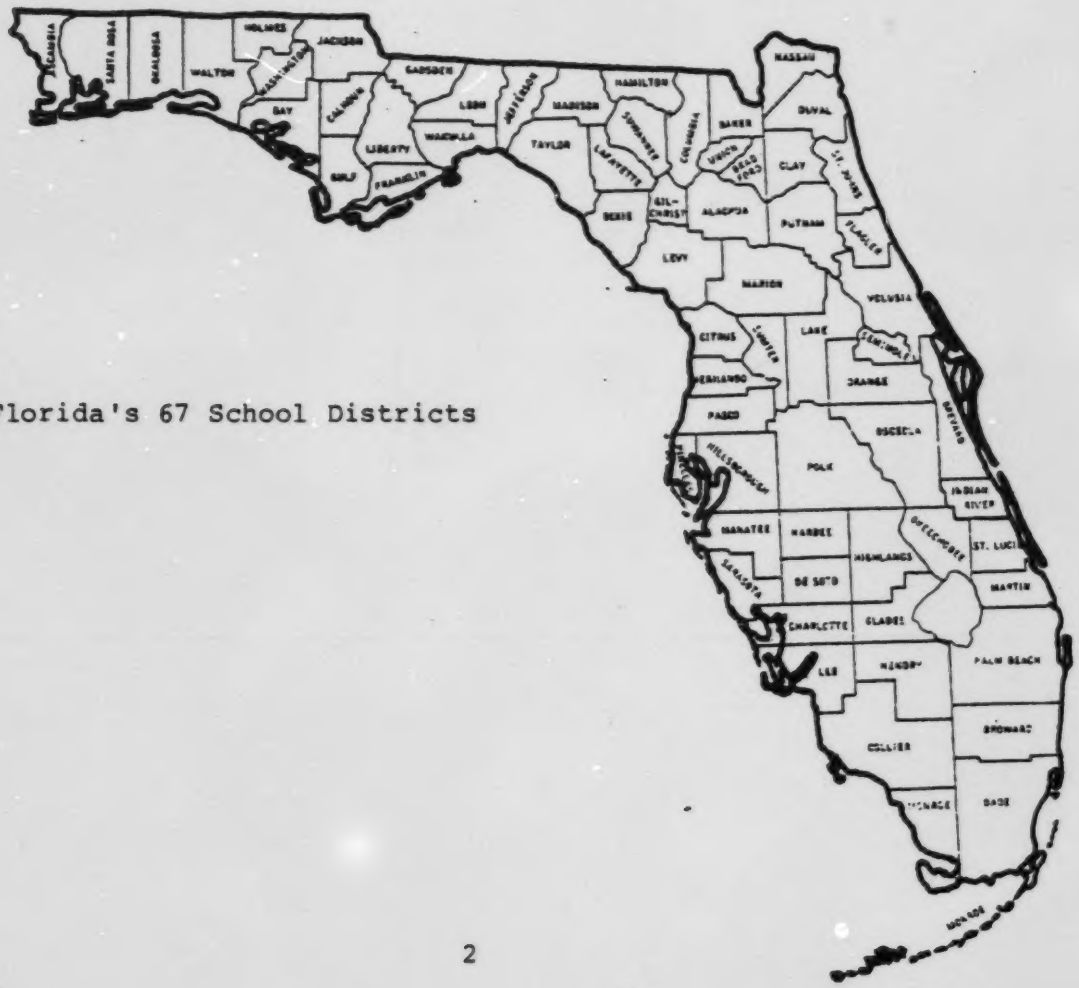
The School District Council on Comprehensive Management Information Systems (Council), comprised of representatives from all 67 school districts, has been working with the Florida Legislature and the Department of Education since 1975. Goals of this joint effort have been to achieve equitable access to educational (administrative and instructional) computing for all 67 school districts, reduce and/or minimize teacher data burden as well as to build an automated multi-directional information exchange capability within Florida's public education system. The Council commends the Florida Legislature for its invaluable support and looks forward to a continuation of this relationship during future phases of the FIRN project.

FIRN is an acronym for Florida Information Resource Network--an evolving state-wide vehicle which will enable the movement of data and information between all levels of Florida's educational system, e.g., schools, school districts, Department of Education and Legislature.

Why should Florida develop and implement a FIRN? The answer to this question can be found by looking at the make-up of Florida's educational system in terms of size, current mode of doing business and requirements. Florida has 2,345 schools within 67 school districts (counties) spread over a land mass of 54,136 square miles. More than 90,000 teachers endeavor to reach out to more than 1,500,000 students in rural and urban areas and make available a comparable standard of education state-wide. Florida's teachers and administrators find themselves confronted with reporting, teaching and/or managing requirements. The methods and resources available to meet these requirements differ considerably among schools and school districts. This is particularly true in computer automation. For example, some schools and school districts utilize computers for administrative computing and automated reporting, computer assisted instruction, computer managed instruction and computer science courses. Other schools and school districts use computers to lesser degrees. Some schools and school districts have neither local computing resources nor access to them.

A FIRN is needed to support administrative and instructional activities at all levels within Florida's educational system. With the implementation of a FIRN and improved reporting methods and procedures, it is conceivable that the data burden placed upon our teachers will be held to a minimum. The installation of a FIRN will mean that all 67 school districts will have access via local terminals, micro-computers, mini-computers and/or main-frames to the resources of large educational computing facilities in Florida.

Through the use of custom and/or common educational applications software, all 67 school districts will be able to provide machine readable data such as cost reporting, full-time student membership, vocational education, and other required data in a common format. These school district "pools" of information will then be available, via the FIRN, for automated reporting to or access by authorized individuals within schools, school districts, the Department of Education and the Florida Legislature.



Florida's 67 School Districts

II. SUMMARY OF BACKGROUND INFORMATION

A. LEGISLATIVE PROVISO (1973, 1975, 1976 AND 1981)

A Florida Educational Computing Network has been a goal of the Florida Legislature since 1973. Proviso language was incorporated in the respective appropriations acts, and funds were provided during 1978 through 1981 to enable educational institutions to acquire and share computer hardware and common applications software. The objective of these early sharing arrangements was to establish equitable access to computing resources at all 67 school districts in Florida. Progress towards this objective has been achieved in 49 school districts. The remaining 18 school districts are targeted to receive minimum computing capabilities during 1982. Funds which were included in the 1981 Appropriations Act will be used to acquire and install terminals or micro-computers linked to larger processing facilities within the educational system. Since the larger school districts and regional data centers have the capability to produce magnetic tape media, limited automated reporting to the State will be a reality for all 67 school districts in 1982.

The 1981 Appropriations Act, item 324, provides $175,361 for the Council to work with the Florida Department of Education to..."develop a plan for the implementation of a FIRN. The plan is to be submitted to the Legislature by January 15, 1982, and shall provide for an organized process of identifying information needs, collecting and processing data, and providing information for decision making. The plan shall lead to an automated delivery system of information, flowing from the individual schools through the district to the state and back. A priority implementation approach shall be presented with time lines, funding requirements and appropriate review procedures".

In addition, the 1981 Appropriations Act states: "The Florida Legislature is dedicated to completing the Florida Education Computing Network currently being developed. The goals of the network are the implementation of a state-wide interactive network and the reduction of the data burden on teachers and other personnel. The Department shall continue the development and refinement of automated program cost reporting and vocational education data reporting for occupational students (VEDOS). In addition, a principle emphasis for 1981-82 shall be the automation of student information systems. In particular, the Department shall

assist districts to automate individual student records, student scheduling, grade reporting, student membership and FTE reporting. The commissioner shall require from each district by September 1, 1981, a plan for the automation of these data activities that shall specify how the district will accomplish automated reporting in a way that simultaneously accomplishes a reduction in the data burden on teachers. The commissioner shall report to the legislature by April 1, 1982 on districts' success in implementing these plans. It is the intent of the Legislature that districts shall submit the FTE student membership report based on the February, 1982, student count in machine readable form. If the commissioner determines prior to the deadline for submission of the February, 1982 FTE report that any district is not making satisfactory progress toward accomplishing that objective, he shall notify the district school board of this fact and, if appropriate action is not taken that permits the district to submit its October, 1982 report in machine readable form by the deadline, the district school board shall be directed, pursuant to the provisions of 230.23(11)(B), F.S., to withhold the further payment of salary to the district superintendent until such time as automated FTE reporting is accomplished".

B. OVERVIEW OF DOE/COUNCIL ACTIVITIES

1. 1977 M.I.S. CONCEPTUAL DESIGN (Reference Appendix A)

In 1977, the Florida Department of Education and the Council developed a Management Information Systems (MIS) model to assist school districts with their MIS plans and to promote continuity between MIS plans on a state-wide basis. The model encompassed the following activities and products:

- A N A L Y Z E I N F O R M A T I O N N E E D S

ACTIVITIES:
DETERMINE INFORMATION NEEDED FOR DECISIONS
PREPARE FORMAT FOR FINALIZED 'DECISION' DATA
SEARCH FOR EXISTING INFORMATION IN DATA BASES

PRODUCTS:
DATA BASES: STUDENT/PROGRAM, STAFF, FINANCE, FACILITY AND COMMUNITY

- C O L L E C T D A T A R E Q U I R E D

ACTIVITIES:
DESIGN DATA COLLECTION INSTRUMENT (form, source & time line)
REVIEW OF DATA COLLECTION FORM AND PROCEDURES
COLLECT DATA FROM SOURCE

PRODUCTS:
DATA ELEMENT DIRECTORIES
ANNUAL DATA COLLECTION PLAN

- P R O C E S S D A T A C O L L E C T E D

ACTIVITIES:
MANIPULATE DATA
ANALYZE DATA
SUMMARIZE DATA

PRODUCTS:
ELECTRONIC DATA PROCESSING HARDWARE SHARING
COMMON APPLICATIONS SOFTWARE SHARING

- R E P O R T I N F O R M A T I O N

ACTIVITIES:
PREPARE INFORMATION FOR REPORTING
DISSEMINATE INFORMATION
EVALUATE INFORMATION

PRODUCTS:
REPORTS CATALOG
MIS STATISTICAL REPORTS
DOE PUBLICATIONS

2. DATA ELEMENT DEFINITIONS (DICTIONARIES) - (Reference Appendix D)

The elements that form the foundation for educational information systems in Florida have been divided into six data bases; Finance, Student, Staff, Program, Facilities and Community. During a 1981 update of these data bases, conducted jointly by the Department and the Council, Program was combined with Student while Facilities and Community were left unchanged. Copies of the current version of the three primary data dictionaries are included in Appendix D. Each element in the MIS has been placed in one of the data bases and has been coded as: required by the State, required locally or optional. The main function of the data element dictionaries is to serve as a basic guide for school districts in establishing local information systems.

3. DIVISION OF PUBLIC SCHOOLS COMMON SOFTWARE

The Legislature funded a common software program during the four year period of time from 1978 through 1981. The program provided approximately two-million-dollars ($2,000,000) in project dollars which were used by school districts to improve their data handling capabilities. Through a widespread effort on the part of the Department and the school districts, 61 districts realized some gain or participation in shared applications software. The projects which were funded addressed a broad range of educational administrative activities. Examples include: finance, testing, student, staff, food service and vocational class reporting. Several projects consisted of educational entities sharing computing software and resources with local governmental agencies, a philosophy advocated by the Legislature and backed by proviso language. The commmon software installed as a result of this program has already provided benefits to many school districts and will continue to provide long-term benefits for many years.

4. FLORIDA EDUCATIONAL COMPUTING PROJECT

The Florida Educational Computing Project (FECP) was created in 1977 by the Legislature to improve the "effectiveness, efficiency, and equity of educational computing". At that time "educational computing" meant those administrative computing resources needed by all public educational entities to satisfy local management needs and meet state and federal reporting requirements. The objectives of "effectiveness, efficiency and equity" were accomplished by using existing resources whenever possible. The FECP provided $1,200,000 to school districts to improve computing capabilities where resources were inadequate.

As a beginning point, Florida was divided into eight consortia to encourage the sharing of computing resources. Emphasis was placed on sharing computing resources, usually hardware and software, but in some cases the resources included data processing personnel. For example, some projects called for one institution to do the work of several schools, thereby saving the time and expense of developing several similar programs at different schools. On other occasions, participants shared the cost of a "circuit rider" who served several entities. Tremendous savings in time and dollars resulted from these approaches; costs avoided and actual savings have amounted to over four-million-dollars ($4,000,000) since 1978.

To assist educational institutions to improve the efficiency of their computing capability in the most cost effective manner, the FECP also negotiated state-wide discount agreements with vendors. The savings due to vendor discounts alone have come to just under $700,000 for the period between 1978 and 1981.

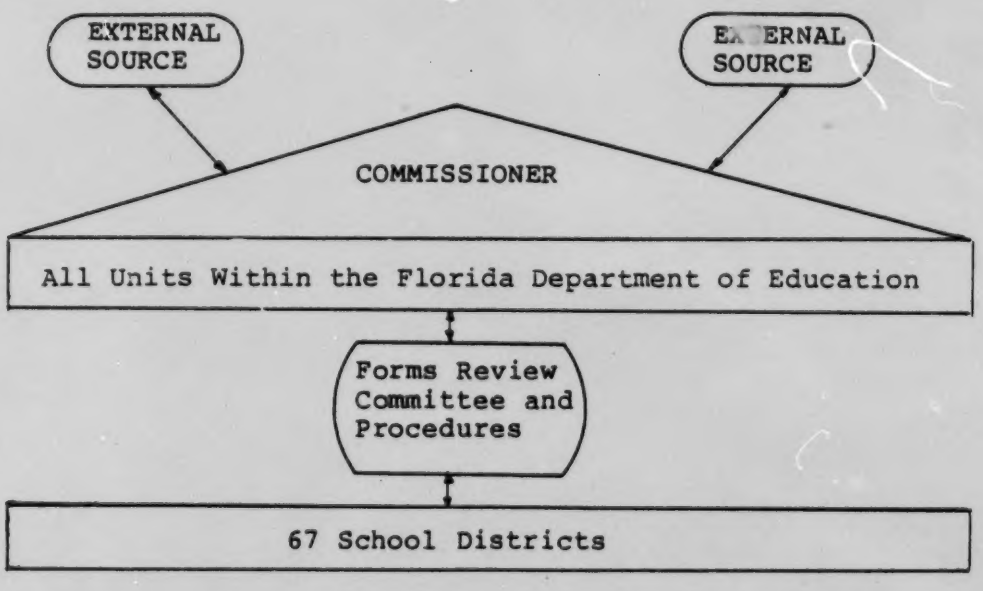
The term "instructional computing" is used to differentiate classroom computing from that of administrative computing. Most FECP activities have been directed toward the equitable distribution of administrative computing applications, but in the last two years the FECP has provided technical assistance and leadership in the area of instructional computing by:

- Assisting with a legislatively mandated instructional computing study. In compliance with the 1979 General Appropriations Act, the FECP assisted the Commissioner's Advisory Council on Instructional Computing in a study of the role, feasibility and cost effectiveness of computer assisted instruction for Florida public education. A report, More Hands for Teachers, was produced;
- Funding pilot projects. Two projects were funded to examine micro-computer resources available for teaching basic skills and for use in other key instructional areas. Three other projects were funded to allow for the sharing of computer assisted guidance systems;
- Developing and presenting a computer literacy seminar. The FECP-designed seminar, entitled Computer Literacy: An Introduction to Technology for the Non-Technical, was presented to school districts, community colleges and Department of Education groups; and
- Assisting with plans for the 1981 Instructional Computing Conference, which was attended by more than 800 Florida educators, most of whom came from school districts.

In summary, the FECP has acted as a coordinating unit for the eight computing consortia throughout Florida and as a service office for educational computing for school districts, community colleges and universities. Because of its work in these areas, Florida is now nationally recognized as one of five states (the others are Minnesota, Texas, California and North Carolina) providing leadership in the area of educational computing. These functions, along with others such as uses of automated reporting and new technology, will be carried out by the recently created Educational Technology Section within the Department of Education.

5. FORMS REVIEW

The Forms Review Committee has been a standing committee of the Council since the mid-1970's. Its charge was to review forms used by the Department of Education to collect information from school districts and to advise the Division regarding format, content and redundant data collection. Since the Committee's inception and the establishment of review procedures, a large number of the Department's forms have been either eliminated or improved. Today, this committee is known as the Data Review Committee. It consists of sixteen school district personnel, drawn from a cross-section of school districts and educational programs or services across the state. Members are selected to serve rotating two year terms. Their role is to review all data collection activities initiated under the sponsorship of the Department of Education which request school districts to collect, maintain, or report data or other items of information. As indicated in the following illustration, data collection needs can emanate from a number of sources within the Department of Education and a multitude of persons and/or organizations external to Florida system of public education.



Since the inception of the Forms Review Committee and establishment of related procedures, any data collection forms sent to any school districts, which were not approved by the Forms Review Committee were considered "bootleg forms" and therefore, the receiver did not need to respond. The current role and scope of the committee, now known as the Data Review Committee, is described in Appendix F.

III. CURRENT STATUS OF FUNCTIONAL COMPUTING CAPABILITY

A. SCHOOL DISTRICTS (also reference Appendix C)

The current status of functional computing capability in Florida's 67 school districts varies from none to extensive. The words "functional computing" are used because they encompass a combination of the information base, technical staff, computer hardware, systems software and educational applications software. A balance of all five resources is required to provide the teachers and administrators of a school district with adequate local and/or remote functional computing capability. Due to financial constraints and numerous other factors, most of Florida's school districts do not have the most desirable mix of these resources to meet their specific needs. To facilitate cost analyses which are included in Section VI, the current functional computing range (from none to extensive) can be divided into the five following groups or levels:

1. No functional computing, e.g., no accounting machine, no terminal linked to a host computer, no micro-computer, no technical staff and no educational applications software;

2. An accounting machine only, used for financial tasks;

3. A computer with limited processing power and peripherals, minimal technical staff and batch-oriented non-integrated or semi-integrated educational applications software;

4. Interactive and integrated educational applications operating in computing installations of significant size and complexity, terminals located primarily at the school district office, non-automated document transfer between the school district office and schools, and a well-trained technical staff; and

5. Interactive and integrated educational applications operating on a computing network comprised of any combination of non-intelligent video and hard copy terminals, micro-computers, mini-computers and main-frame computers located at the school district office and schools, a well-trained technical staff, and user tools such as an ad hoc information retrieval system with "what if" and computational features.

The effort and money required to implement FIRN capabilities will vary from school district to school district because of the present disparity in functional computing resources. To achieve either local or remote access to group/level 5 (mentioned previously) functional computing resources at all 67 school districts and a multi-directional interactive network throughout Florida (schools, school districts, Department of Education and Legislature) will require considerable time, money, talent and dedication. To extend this same power to Florida's 2,345 schools, where a higher probability of truly reducing teacher data burden exists, will require even greater quantities of these same essential elements.

B. DEPARTMENT OF EDUCATION

The Department of Education is a user of the State University System (SUS) Northwest Regional Data Center (NWRDC) and, as such, has access to a vast array of computer hardware, systems software and talent at the NWRDC and throughout the SUS network. Through the efforts of its own applications development staff, the Department of Education has designed and implemented a significant number of systems at the NWRDC in support of Department planning, decision-making and operational needs.

The Department of Education has developed and contracted for third-party development of common applications software such as VEDOS and Cost Reporting. Versions of this software have been developed to operate in different computer hardware and systems software environments. These application products have been distributed to school districts which have functional computing resources sufficient to run them. The philosophy behind centralized development efforts is to save analyst, programmer and computer time and therefore public monies.

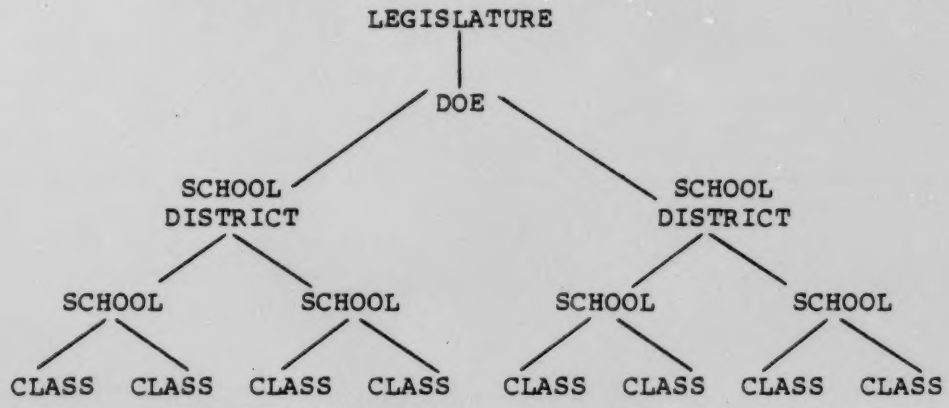
IV. FUTURE FUNCTIONAL COMPUTING GOALS & OBJECTIVES

A. OVERVIEW DISCUSSION (CLASSES, SCHOOLS, DISTRICTS, DOE, AND FLORIDA LEGISLATURE INFORMATION HIERARCHY)

To be successful in any organized endeavor, decisions affecting direction, emphasis and operation must accurately target needs and optimally allocate resources to meet those needs. Those charged with the responsibility of making these decisions must rely on their own skills and the availability of timely, accurate information.

The State of Florida has long recognized the importance of decision making elements and has, over the years, continually worked to improve not only the skills but also the information base used to set the course for public education. In the latter of these efforts, improving the information base, computer technology has been viewed as a vital tool yet one often presenting as many problems as solutions.

Section V of this plan presents a phased implementation strategy for a FIRN which will meet the objective of providing timely, accurate information while capitalizing on investments made to date in achieving that objective. **In essence, the purpose of the network is to--deliver the right information at the right time to the right place as efficiently as possible.** To better appreciate the concepts proposed by the design and phased implementation, examine the detailed presentation of the "Educational Information Hierarchy" reflected in Appendix B. The following figure also presents this hierarchy:



As illustrated, there are five levels in the pyramid ranging in function from executive (setting policy and long-range plans) to management (allocating and overseeing resources to implement policies and plans) to operational (delivering resources to the target population). At each level a variety of information needs exists, all sharing common characteristics.

Each level within the pyramid is an information repository. In the interest of efficiency, only that information appropriate to the primary activity is held at a given level. As examples, teachers, as required by law, keep detailed records on individual students, school administrators record class summaries, district administrators record school summaries. Standards and procedures must be established to ensure that, should a question requiring a detailed response arise at any level, the information chain can carry to the next lower level for expansion. As examples: a school administrator, noting exceptional achievement by students in one class, may access a teacher's records to gain further insight; a district administrator, seeing a drop in attendance at a school, may require more detailed information from the school administrator. In addition to these information requests from within the pyramid, there are requests from without. These may originate from a myriad of sources and enter the pyramid at any level.

While the information provided by such a pyramid is invaluable, one negative aspect exists. The bulk of the weight of a pyramid rests on the lowest level. Therefore, the greatest data burden is placed on the teachers. Three ways to reduce this burden are to:

1. Eliminate redundant data collection;
2. Transfer recordkeeping to either the next higher level in the pyramid or to an external resource; and
3. Improve the tools available to manage data at the level itself.

B. PROBLEMS AND PROMISE

With information requests ever-present and ever-growing, school districts able to dedicate resources to information automation have acquired computer hardware and software (computerized information systems) capable of meeting their individual needs to the extent their resources permitted. As presented in Section III.A, the current status of functional computing capability, resident at Florida's 67 school districts, can be grouped into five major categories.

It may help to examine more closely what has resulted from past individual district efforts governed primarily by the availability of resources. The result can be seen in:

1. A lack of standardized and compatible information maintained from district to district;
2. A variety of computer hardware and software, often incompatible from one district to the next; and
3. A disparity of resources, with some districts possessing extremely sophisticated information handling systems and others relying entirely on manual records.

To address these inequities and improve the overall ability of a state-wide information network, many efforts were begun and have thus far established the foundation on which this plan rests. The most notable of these are:

1. The direction established by the Legislature and its funding of early sharing arrangements;
2. The conceptual design and data element dictionaries developed by the Council;
3. The common software distributed/funded by the Division of Public Schools;
4. The hardware made available by funding through the Florida Educational Computing Project;
5. The efforts to reduce and standardize data collection by the Forms Review Committee;
6. The networking accomplishments made thus far by school districts, community colleges and State University System; and
7. The Florida Education Computer Network Steering Committee.

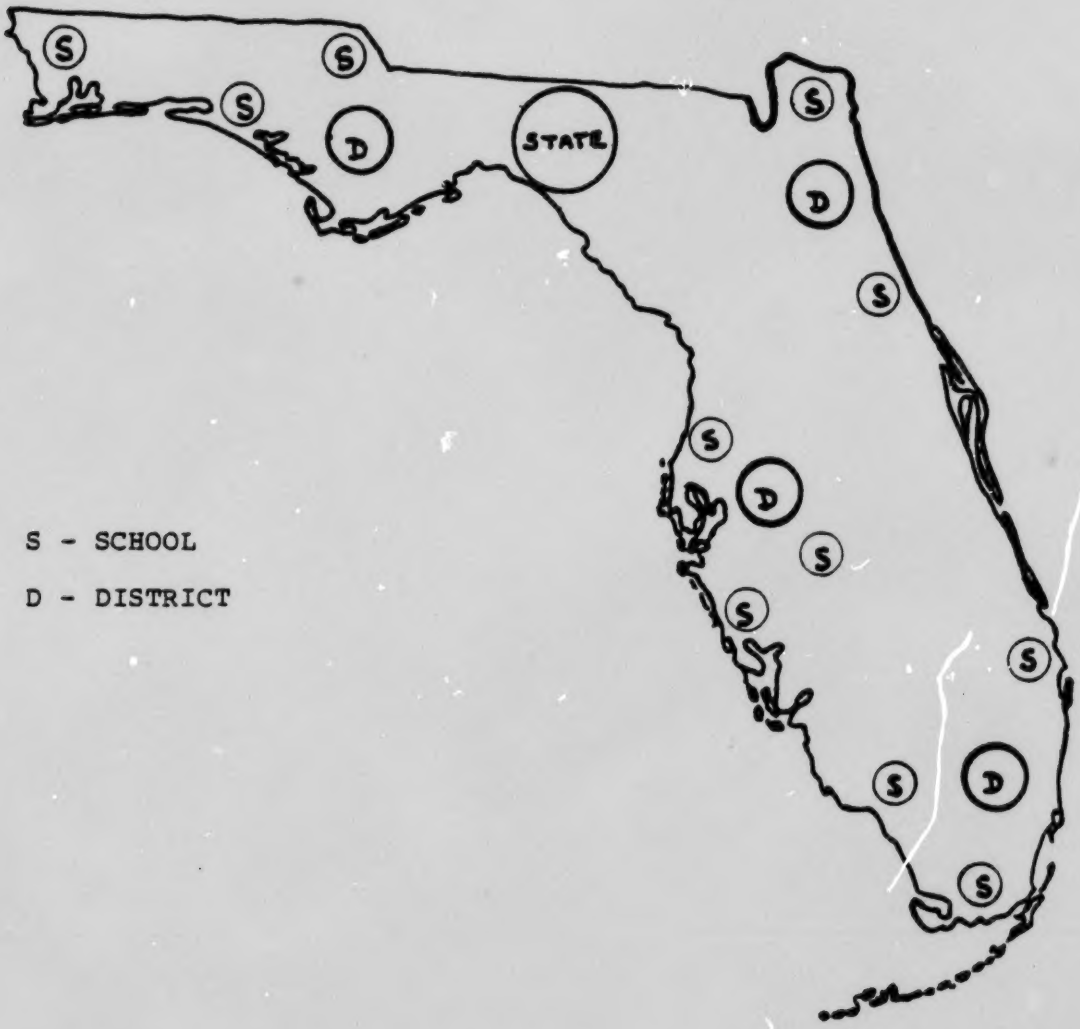
Because of these activities, the Florida system of public education is equipped with a solid base on which to build the Florida Information Resource Network--component by component, phase by phase.

C. GENERAL INFORMATION NETWORK DESIGN DISCUSSION

Implementation of a delivery system capable of supporting the variety of information requirements discussed in Section IV.A, while simultaneously overcoming the problems inherent in an effort of this magnitude, requires a carefully planned, thoughtfully implemented information network. Herein are presented the design for such a network and a discussion of the seven individual resources (Network Hardware, Network Software, Network Technical Staff, Information Base/Data Review Committee, Information Processing Hardware, Information/Application Software and Information/Application Technical Staff) which comprise the final product and are critical to its success. The design intends to capitalize on, rather than displace, efforts to date. These resources should be understood individually yet viewed as a whole for the plan to succeed. In presenting the design, each resource is introduced as an analogy to provide an understanding of the function served by the resource without using technical terminology. Later, in Appendix E, these resources are discussed at a more technical level.

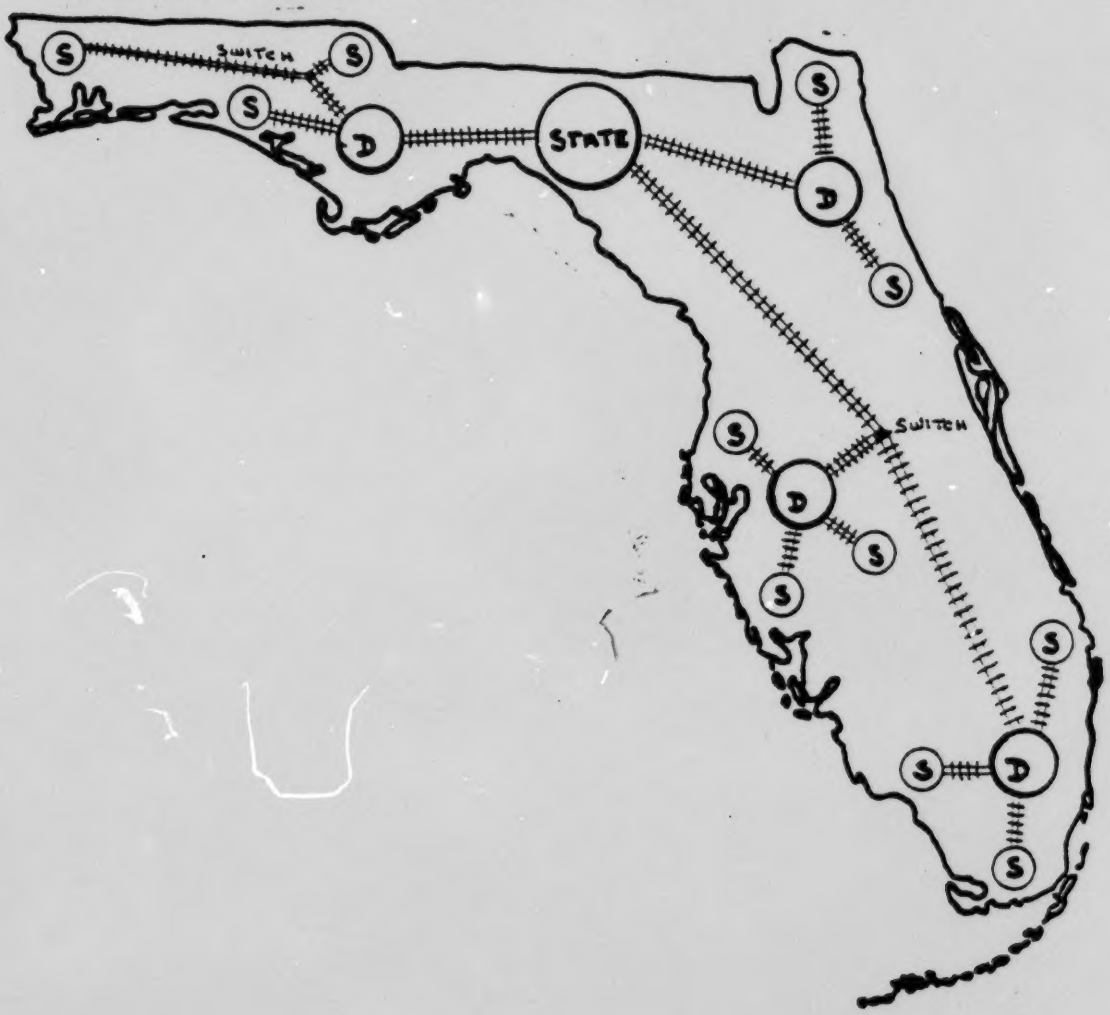
With the purpose of an information network being to provide the ability to deliver the right information at the right time to the right place as efficiently as possible, it can be likened to the development and operation of a railroad. Therefore, the seven resources which comprise the network will be introduced in those terms.

Prior to laying track, railroad planners must assess the need for delivery to various locations, anticipated volumes and frequencies, etc. In the Florida Information Resource Network (FIRN) these "destinations" might be illustrated in the following figure:



As presented in Section IV.A, information must be delivered to and from schools, school districts, and the Department of Education and Legislature in Tallahassee. Also discussed in Section IV.A, were the various characteristics of the "information freight" to be delivered - how much, how often, and in which direction. This knowledge - how much information freight originates at each depot (node), how it must be packaged, to where it is delivered and how often - is the design of the Information Base itself.

Equipped with this information, just as the railroad planners can design the network of tracks which will connect each of the depots, the network planners can connect each of the nodes in the FIRN. Adding tracks to the previous figure creates the following illustration:



The planners recognized, in this illustration, the need to have connector lines supporting the daily flow of information freight between school depots and their respective district offices as well as long haul lines which could carry larger volumes of freight over longer distances. Also note they had the foresight to install switches allowing trains to be routed to different destinations when the anticipated volume of freight could not justify the cost of individual tracks. These tracks and switches, as shown in the illustration, are representative of the Network Hardware required to establish routes for the information to travel between points.

With the tracks (network lines) laid, the network is in place. The tracks do not dictate what brand of train runs on the tracks. However, each train must be of the same gauge as the tracks, be able to clear bridges, and so on. This is also the case with FIRN. Information may originate on any kind of Information Processing Hardware, as long as that computer can "fit the tracks".

Now the network is ready to move to its next phase--operation. It is immediately apparent that two trains cannot head towards one another on the same track without colliding. Also, switches must be thrown to direct them to the correct destination. Therefore, it is necessary to have a system of signals to control routing and scheduling. With the FIRN, this is the function of the Network Software. This resource of the FIRN controls the movement of the information.

The network is now equipped to operate but still unable to deliver its information freight. Somehow the freight must be loaded on the trains. This function is met by Information/Application Software which has been designed and programmed by Information/Application Technical Staff (programmer/analysts). These are technicians who are knowledgeable of system design, programming and the user procedures performed by educational administrators. They can be selected from within the educational system and/or private firms to form the most proficient team possible to address the task at hand. The Information/Application Software will maintain a "dynamic" Information Base of Student/Program, Staff, Finance, Facility and Community data. An information request can now be initiated in Tallahassee, sent down the network communication lines and received at a network node. Information/Application Software will then analyze the request, gather the information needed to effectively respond, package the information, affix a destination address and load it on the next train (packet) leaving for Tallahassee.

Finally, the network appears to be operational yet no information is being transmitted. The last resource is missing. To function, the network must have Network Technical Staff just as the railroad must have engineers and switchmen. These persons will actually operate and maintain the network and see that the "information freight" is delivered to the right destinations at the right time.

D. RESOURCES OF THE FLORIDA INFORMATION RESOURCE NETWORK

Therefore, it can be seen that the Florida Information Resource Network is comprised of seven essential resources. A brief non-technical description of these seven resources follows:

1. Network Hardware - As described in the railroad analogy presented earlier, the Network Hardware is to the computer network much the same as the tracks are to a railroad system. The Network Hardware, in non-technical terms, is a combination of electronic boxes and data communication land lines, microwave and/or satellites. The specific types of equipment and mode of data communication used between network points will be transparent to the users of the FIRN.

2. Network Software - Software refers to programs or instructions used to tell computers what to do. Network Software packages the data for delivery, presents the data to the Network Hardware and tells the Network Hardware where to route packages of information. Network Software, at the destination point, prepares the data for presentation to the Application Software. This approach is sometimes referred to as packet-switched networking.

3. Network Technical Staff - Personnel are required to make the FIRN operational and keep it running. Without the proper technical staff, at the right locations, the services of the FIRN will be totally inadequate, and the FIRN will fail. From the outset, knowledgeable staff members must be in place to make decisions concerning the selection and development of Network Hardware and Network Software resources.

4. Information Base/Data Review Committee - An early task in the development of the FIRN will be the design of the Information Base, e.g., the logical identification of the levels of integration and the standardization of data elements at school, district, Department and Legislative plateaus within the Educational Information Hierarchy. Appendix B illustrates the hierarchy while Appendix D reflects the characteristics of the hierarchy's data elements. Even though considerable work has been done in these two areas, a significant challenge lies ahead as the more technical issues of logical design and physical implementation are addressed. These will require the services of personnel, public and/or private, knowledgeable of distributed computing and distributed processing as these concepts apply to educational computing.

The design will parallel the pyramid illustrated in Section IV.A, providing for retention of data sufficient in detail for the primary function of the level at which it resides. The design will also make available clearly defined upward and downward paths of information flow with standards for summarization. Decisions regarding the addition, deletion or modification of these data elements will be overseen by the Data Review Committee and the Department of Education, Division of Public Schools (Appendix F).

5. Information Processing Hardware - As mentioned earlier, this resource will be resident at the DOE, which is serviced by the SUS-Northwest Regional Data Center, and the regional data centers and/or school districts throughout the State. It is conceivable that the equipment which will be installed during Phases IV (district) and V (school) will be of a micro-computer architecture thereby enabling some degree of distributed computing to take place at the smaller school districts and many, if not most, of the 2,345 schools in Florida. During Phases II, III, IV and V, this plan will establish communication links between schools/districts requiring computing assistance and a provider or host site within the Florida system of public education. The provider site could be another school district, community college or a SUS-regional data center. As processing work loads are increased at these provider sites, additional processing hardware such as memory and storage devices will be required. In some cases the computer's Central Processing Unit (CPU) may require upgrading. The costs associated with these upgrades must be borne by the new users, who in many, if not all cases, cannot afford these costs. Therefore, if a FIRN is to become a reality, a significant amount of funding must be provided by the State to build it and for a limited number of years, to assist in keeping it running.

6. Information/Application Software - This software supports user activities such as scheduling students, paying employees, and keeping financial records. Each functional activity, such as purchasing or FTE reporting, is supported by computer programs called a system. These systems are used to enter data in the Information Base, maintain the Information Base once the data has been entered and extract information in the form of video terminal screens or reports. Educational administrative systems differ from other systems since the business of education is different from other businesses. In education, the focus is on systems such as:

FINANCE	STUDENT	STAFF
Accounts Payable	Record Keeping	Payroll
Budgeting	Schedule Activities	Positions
General Ledger	Grade Reporting	Personnel
Purchase Order	Attendance	In-Service
Revenue	VEDOS	Skills Records

The importance of good Information/Application Software cannot be stated too strongly. The FIRN will not be fully operational until either new Information/Application Software is written, or the existing software is modified. This activity can be accomplished by a central development team, private firms, school district staff or any combination of these sources.

7. Information/Application Technical Staff - Just as the Network Technical Staff makes the Network Hardware and Network Software operational and keeps it running, a team of Information/Application Software specialists in educational administration is required to build the many Information/Application Software systems required by school, district, DOE and Legislative personnel. Integrated interactive systems must be designed and programmed for every level within the Educational Information Hierarchy. These systems will need to address planning, decision-making and operational needs as related to Student/Program, Staff, Finance, Facility and Community information at all levels of the hierarchy. This software will reside on main-frame computers, minicomputers and micro-computers (Information Processing Hardware) within the FIRN. As stated earlier, this staff can come from the Department, institutions, private firms or any combination of these sources. This plan recommends a combination approach to bring extensive resources to the task during Phase II through Phase V.

V. IMPLEMENTATION PHASES (ASSUMPTIONS, OBJECTIVES, ACTIVITIES AND TIME FRAMES)

A. OVERVIEW DISCUSSSION

The following assumptions were made before stating the objectives, activities and time lines associated with each of the phases in this plan:

- **More money and more people will not compress the time lines beyond those given in Section VII.**

- The Florida Information Resource Network is too large and complex to implement in a single effort. The project must be divided into phases, each having its own objectives, series of activities and milestones.

- A sufficient quantity of the seven essential FIRN resources, described in Section IV.D, and adequate funding must be present during each phase. The absence of any of these resources or funds at any time during the course of implementation will spell certain disaster for that phase and all subsequent phases. The latter is not only true because a building block approach is required, but also because of the credibility gap created by failure.

- The plan anticipates that the project's management and technical personnel will need to maintain a balance between being **"technical pioneers"** or **"technical followers"**. While the goals and objectives stated earlier may change to some degree over time, it is almost certain that the technology available to meet those goals and objectives will be upgraded during the course of the project. Because of this, the planning activity needs to be viewed as an ongoing, dynamic activity, always aiming to select a path which will produce the desired results in the most cost-effective manner available at the time.

B. PHASE I - SEMI-AUTOMATED CAPABILITY AT THE DISTRICT AND/OR REGIONAL LEVEL USING MAGNETIC TAPE TRANSFER OR DATA COMMUNICATIONS TRANSMISSION TO THE DOE

The 1981 Legislative Appropriations Act requires all 67 school districts to furnish their February, 1982, Student Full Time Equivalency (FTE) data to the State in machine readable media. Some districts will either electronically transmit this data over communication lines or provide a magnetic tape as they have in the past. Eighteen school districts, those without computing resources or magnetic tape units, will need to find a neighbor district, college or university to help them or will need to contract with a service bureau for support.

C. PHASE II - AUTOMATED CAPABILITY AT THE DISTRICT AND/OR REGIONAL LEVEL USING MAGNETIC TAPE OR DISKETTE TRANSFER WITH INCREASED DATA COMMUNICATIONS TRANSMISSION TO THE DOE

- During fiscal year 1981-82, the Division of Public Schools will award $240,000 to the 18 school districts without automated reporting capability. These funds will be used to install terminals, micro-computers or other equipment. It should be understood that the average dollar value of grants awarded to these school districts will vary based on need. Also, the Division of Public Schools reserves the right to make modifications to the Group I and II dollars identified in this section.

GROUP I - INSTALL TERMINAL OR MICRO-COMPUTER

DISTRICT	LINKED TO	VIA (NODE)
BAKER	PUTNAM/NEFEC	DIRECT LINK
BRADFORD	PUTNAM/NEFEC	DIRECT LINK
CALHOUN	DOE/NWRDC	BAY NODE
FRANKLIN	DOE/NWRDC	DIRECT LINK
HAMILTON	PUTNAM/NEFEC	DIRECT LINK
HERNANDO	HERNANDO COUNTY	DIRECT LINK
HOLMES	DOE/NWRDC	BAY NODE
LAFAYETTE	PUTNAM/NEFEC	LEVY OR DIRECT
MADISON	DOE/NWRDC	DIRECT LINK
NASSAU	DOE/NWRDC	DUVAL NODE
OKEECHOBEE	DOE/NWRDC	PALM BEACH NODE
SUWANNEE	DOE/NWRDC	DIRECT LINK

GROUP II - LINK EXISTING SYSTEM TO HOST WITH MAGNETIC TAPE

CITRUS	DOE/NWRDC	ALACHUA NODE
COLUMBIA	DOE/NWRDC	ALACHUA NODE
FLAGLER	PUTNAM/NEFEC	DIRECT LINK
MONROE	DADE	DIRECT LINK
ST. JOHNS	DOE/NWRDC	DUVAL NODE
SANTA ROSA	DOE/NWRDC	ESCAMBIA NODE

GROUP I = $168,000
GROUP II = $ 72,000

- A second activity during Phase II will focus on the Information/Application Technical Staff (public and/or private firm employees) further defining the data elements, logical design and physical implementation of the required "pool" of Student/Program, Staff, Finance, Facility and Community information.

Much of the work pertaining to the definition of the data elements to be maintained at the various levels within the Information Base hierarchy has already been completed by the Department of Education and Council "teams" which developed the data dictionaries shown in Appendix D.

PHASE II continued

The next step is the establishment of an Information/Application Software development "team" comprised of individuals from the public educational system and/or private enterprise. This team's charge will be to solicit user information needs from the Legislature, Department, school districts and schools. This information will need to be studied to determine what elements will be required to effectively respond to questions which will be raised by the FIRN user constituency in the future.

Having completed the user needs analysis, the Information/Application "team" will build a logical design of the Information Base hierarchy level by level. After the logical design is established, the "team" will need to communicate with staff members working on the Network Hardware and Network Software to insure that the individual designs of FIRN resources will be compatible when combined to form a whole. During these team check points, information will be exchanged, and the course of the project will be modified and re-set as required to provide for a better end product.

- A third activity during Phase II will be the establishment of procedures to promote the formation of a more compatible Information Processing Hardware base throughout the State. Compatible Information Processing Hardware will assist in the singular development of Information/Application Software for <u>different levels</u> of the Information Base hierarchy and subsequent state-wide dissemination of these application products. Clearly, it is more cost-effective to have **one** set of multi-level application products which will run, without change, on all the Information Processing Hardware distributed throughout the State at school, district and State levels than to have **many** sets. This plan recommends that the following steps be taken to further the goal of a more compatible Information Processing Hardware base in Florida's system of public education:

1. Development of specifications for "Information Processing Hardware" for **each** level of the Information Base hierarchy (State, school district, school and perhaps later, classroom). In some cases, the specifications will vary even within one level. For example, the Information Processing Hardware needs of a school district with 200,000 students will understandably be quite different from those of a district with 2,000 students.

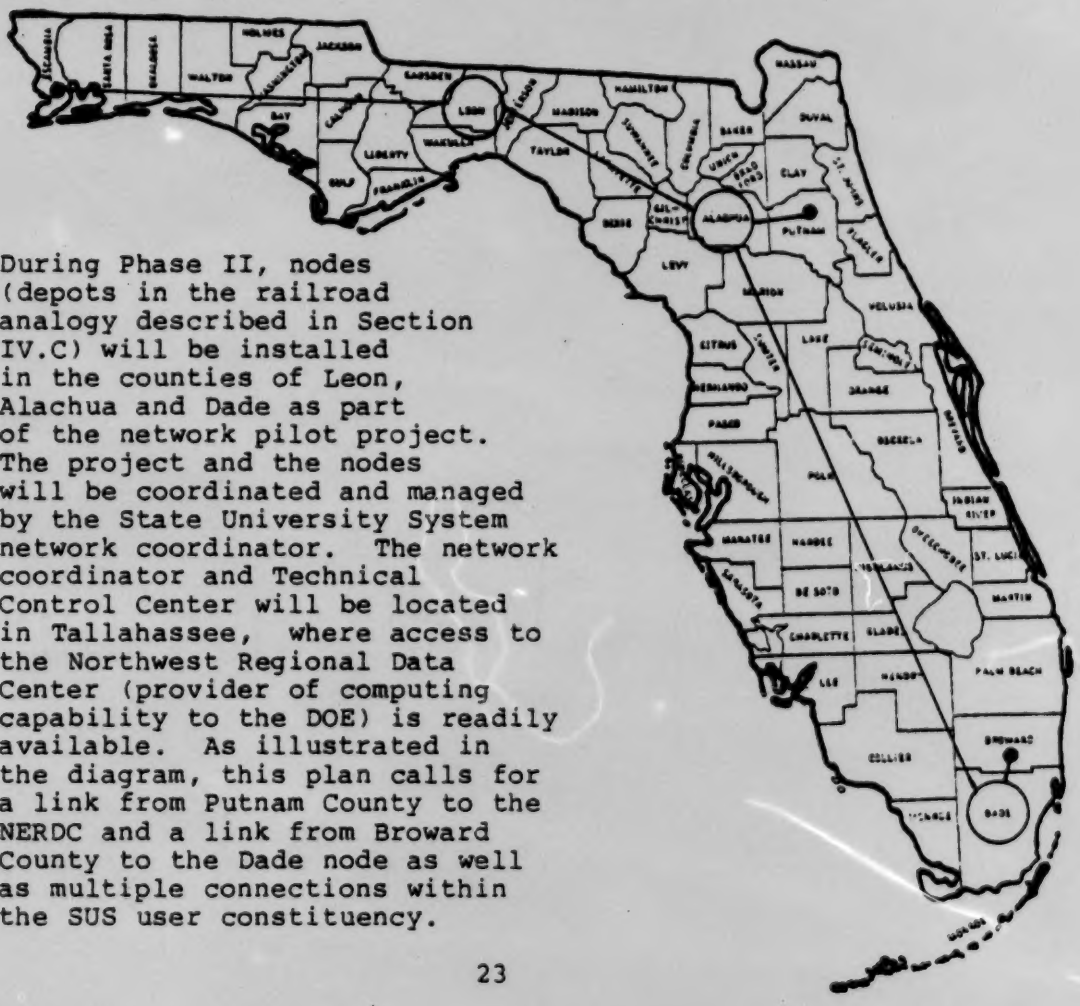
2. Establishment of technical standards to govern Information/Application Software system design, programming and technical/user documentation.

PHASE II continued

3. Coordination of State, regional and multi-district Invitation to Bid documents and Bid evaluation procedures for the different Information Base processing levels and sub-levels.

4. Continuation of the Department of Education's role pertaining to the review of school district, community college and university computer hardware acquisitions. The Council encourages the setting of a $15,000 per item minimum rather than the current $6,000 minimum stated in proviso language.

- Another PHASE II activity recommended by this plan is the initiation of a **"Network Pilot Project"** using approximately $252,000 in funds from the Council, Division of Public Schools, Division of Community Colleges and State University System.



During Phase II, nodes (depots in the railroad analogy described in Section IV.C) will be installed in the counties of Leon, Alachua and Dade as part of the network pilot project. The project and the nodes will be coordinated and managed by the State University System network coordinator. The network coordinator and Technical Control Center will be located in Tallahassee, where access to the Northwest Regional Data Center (provider of computing capability to the DOE) is readily available. As illustrated in the diagram, this plan calls for a link from Putnam County to the NERDC and a link from Broward County to the Dade node as well as multiple connections within the SUS user constituency.

D. PHASE III - AUTOMATED CAPABILITY AT THE DISTRICT AND/OR REGIONAL LEVEL WITH BATCH BI-DIRECTIONAL DATA COMMUNICATION TRANSMISSION OF STRUCTURED INFORMATION SUCH AS FTE, VEDOS AND COST REPORTING

The key word in reference to the functional computing capability which will be put in place during Phase III is **"structured"**. Activities associated with this phase will provide Information/Application Software, residing on Information Processing Hardware, which will maintain a pre-defined or structured "pool" of information for automated reporting and the answering of specific questions related to Student/Program, Staff, Finance, Facility and Community information. All 67 school districts will be linked to the State either directly or via a host (regional center) to enable electronic transmission of information in a bi-directional manner.

Because of the structured nature of the Information Base ("pools of information") during Phase III, it is very important that the application planners, developers and writers begin careful evaluation of the information needs of legislators and educators at this time. To make this "batch" question, answer and reporting capability of the FIRN operational according to the time line reflected in Section VII, work on the system design, programming, technical documentation and user documentation should begin immediately. These tasks should be addressed by State, regional, school district, private firm personnel or any combination thereof as soon as possible.

There are two ways by which the FIRN Information/Application Software "team" can provide the State, school districts and schools the ability to enter, maintain and extract data from their respective levels within the Information Base:

1. Provide Information/Application Software at each level of the Educational Information Hierarchy shown in Appendix B; or
2. Provide a modification to existing Information/Application Software at each level of the Educational Information Hierarchy.

The Application Software at each level must be able to:

1. Provide for the establishment and maintenance of the Information Base at that level, preferrably as part of present on-going operational procedures;
2. Provide for the packaging and presentation of data to the Network Software; and
3. Provide video terminal screens and/or reports of information for planning, managing and reporting.

E. PHASE IV -INTERACTIVE AD HOC INFORMATION (STUDENT/PROGRAM, STAFF, FINANCE, FACILITY AND COMMUNITY) RETRIEVAL AND REPORTING CAPABILITY FOR DISTRICT, DOE AND LEGISLATIVE LEVELS OF EDUCATIONAL MANAGEMENT

During Phase IV, the Information Base will be expanded to include information elements in addition to those maintained and made available as a result of Phase III activities. While the Information Base will be broadened at this point in the evolution of the FIRN, the primary improvement to the users of the FIRN will be the introduction of "interactive" and "ad hoc" capabilities during Phase IV.

The "batch" Information/Application Software will need to be expanded, upgraded and in some instances replaced with "interactive" versions which will address the on-line data entry, record update and information retrieval of Student/Program, Staff, Finance, Facility and Community information. These versions will be designed, programmed, distributed and in some instances installed by the Information/Application Software "team". The new versions will need to be made available for the primary types (vendors) of Information Processing Hardware installed throughout the Florida system of public education and for every level within the Educational Information Hierarchy.

With the installation of interactive and ad hoc features, users of the FIRN will be able to initiate a question at one location within the network direct it to another location or locations within the network, access a "live" Information Base at that level and receive an answer to the question within moments of its initiation. For example, during the Legislative Session, a need arises for "current" information on the number of students in a particular "program" at school districts between 35,000 and 70,000 FTE and the information is needed in summary form by race and sex. The Network Hardware, Network Software, Information Base, Information Processing Hardware and Information/Application Software will be "in place" to provide an answer to this question within seconds or at the most a few minutes after the request is entered into the FIRN.

The Phase IV functional computing capabilities will be made available at the "State" and "school district" levels. This means that a significant investment in the seven FIRN resources, outlined in Section IV.D of this plan, will need to be made at the State level, regional level and at all of Florida's 67 school districts. These costs are outlined in Section VI.

F. PHASE V - INTERACTIVE AD HOC INFORMATION (STUDENT/PROGRAM, STAFF, FINANCE, FACILITY AND COMMUNITY) RETRIEVAL AND REPORTING CAPABILITY FOR SCHOOL, DISTRICT, DOE AND LEGISLATIVE LEVELS OF EDUCATIONAL MANAGEMENT

During Phase V, the Information Base will be expanded to include information elements which will be maintained at the "school" level. The "interactive" and "ad hoc" capabilities introduced during Phase IV will be expanded to 2,345 schools within the State by implementing Information Processing Hardware linked to district points in the network.

Some school districts will use micro-computers to support distributed processing components (school level) of the FIRN Information/Application Software.

Other school districts will install terminals at schools to achieve the desired interactive and ad hoc functional computing capabilities at the "school" level. These terminals will be connected to the Information Processing Hardware at the district office. Through the use of these terminal devices, school-based administrators will be able to create, retrieve and update information elements related to Student/Program, Staff, Finance, Facility and Community. With the linkage between the school-based terminals and the district Information Processing Hardware resources, a more centralized approach to attaining the desired interactive and ad hoc information processing facilities will have been taken than the decentralized or distributed concept of micro-computers.

Both approaches will work, and both are acceptable from the standpoint of this plan. The decision as to which is most cost-effective will vary from district to district and perhaps school to school, based on FTE count, location, present hardware/software base and other variables. In either case, administrators at schools will receive a new or increased level of computing capability. As a direct result, the timeliness and accuracy of information for all the users of the FIRN will be improved.

During Phase V, the resources of the FIRN will be made available at State, school district and "school" levels. Therefore, a substantial financial investment will be required during Phase V to provide for the devices (micro-computers or terminals), data communication lines, Information Processing Hardware, Information/Application Software and technical staff required to support 2,345 schools state-wide.

VI. ANTICIPATED COSTS

A. OVERVIEW DISCUSSION

Many school districts have already spent millions of dollars to provide computing resources to support administrative and instructional activities. This plan is designed to capitalize on the investment made thus far. The dollars already spent should be viewed as "in-kind" funds which have been contributed by school districts to form the base from which the Florida Information Resource Network will grow.

The costs associated with the development and installation of the FIRN will vary from district to district depending on the present status of functional computing. Another impacting variable will be the different degrees of automation needed by the members of the user population. The costs presented herein are based on today's goals and known technologies to achieve these goals. The goals, however, must be viewed as dynamic points along a technological continuum--these points will move, over time, as a result of new product announcements.

"School district related costs", such as Information/Application Software implementation personnel and user training personnel should be funded with categorical (direct) dollars which are in addition to FEFP dollars.

Also, circuit riders (individuals), capable of assisting the users of the 20 district and/or regional centers, will be needed during each phase of implementation. The cost of these resources has also been included in this section.

After Phase V, the school districts will be faced with a very significant annual on-going cost (approximately 25% of the total network cost per year or $11,500,000) for items such as hardware maintenance, software maintenance and communication lines. While this plan does not reflect these costs, it is suggested that the Florida Legislature and Department of Education begin making plans to assist school districts with these **on-going costs** through the use of categorical funds in addition to future FEFP dollars.

B. PHASE I

No costs have been reflected for Phase I since all 67 school districts will be using existing or "temporary" resources to comply with the proviso language requiring machine readable student FTE data by February, 1982. However, it should be recognized that there are real costs associated with Phase I and that these dollars should be considered "in-kind" school district expenditures.

PHASES II, III, IV AND V AS RELATED TO FISCAL YEARS

PHASES	ITEMS	81-82	82-83	83-84	84-85	85-86	86-87	TOTALS
II.	Network Hardware	240,000	230,000	42,000				
	Network Software		20,000					
	Network Staff		79,160	15,840				
	Information Hardware		516,000					
	Application Software		200,000	50,000				
	Application Staff		80,000	15,000				
	Sub Total	240,000	1,125,160	122,840				1,488,000
III.	Network Hardware		147,720	993,260	73,960			
	Network Software			30,000	10,000			
	Network Staff		46,680	140,040	23,340			
	Circuit Riders		260,000	900,000	40,000			
	Information Hardware		402,000	1,206,000	201,000			
	Application Software		440,000	1,350,000	210,000			
	Application Staff		80,000	240,000	35,000			
	Installation Staff		280,000	870,000	150,000			
	Sub Total		1,656,400	5,729,300	743,300			8,129,000
IV.	Network Hardware			200,000	900,000	756,000		
	Network Software			10,000	20,000	20,000		
	Network Staff			54,160	162,480	108,360		
	Circuit Riders			300,000	900,000	600,000		
	Information Hardware			488,000	2,469,000	1,780,000		
	Application Software			400,000	1,500,000	900,000		
	Application Staff			80,000	240,000	155,000		
	Installation Staff			420,000	1,300,000	815,000		
	Sub Total			1,952,160	7,491,480	5,134,360		14,578,000
V.	Network Hardware					1,100,000	2,100,000	
	Network Software					35,000	30,000	
	Network Staff					175,000	175,000	
	Circuit Riders					1,200,000	1,200,000	
	Information Hardware					3,283,000	6,567,000	
	Application Software					1,250,000	950,000	
	Application Staff					245,000	245,000	
	Installation Staff					1,300,000	1,300,000	
	Sub Total					8,588,000	12,567,000	21,155,000
	TOTAL	240,000	2,781,560	7,804,300	8,234,780	13,722,360	12,567,000	45,350,000

COST SUMMARY BY FISCAL YEAR

RESOURCE	81-82	82-83	83-84	84-85	85-86	86-87	TOTALS
Network Hardware	240,000	377,720	1,235,260	973,960	1,856,000	2,100,000	6,782,940
Network Software		20,000	40,000	30,000	55,000	30,000	175,000
Network Staff		125,840	210,040	185,820	283,360	175,000	980,060
Information Hardware		918,000	1,694,000	2,670,000	5,063,000	6,567,000	16,912,000
Application Software		640,000	1,800,000	1,710,000	2,150,000	950,000	7,250,000
Application Staff		160,000	335,000	275,000	400,000	245,000	1,415,000
Circuit Riders		260,000	1,200,000	940,000	1,800,000	1,200,000	5,400,000
Installation Staff		280,000	1,290,000	1,450,000	2,115,000	1,300,000	6,435,000
TOTALS	240,000	2,781,560	7,804,300	8,234,780	13,722,360	12,567,000	45,350,000

COST SUMMARY BY PHASE

RESOURCE	PHASE II	PHASE III	PHASE IV	PHASE V	TOTALS
Network Hardware	512,000	1,214,940	1,856,000	3,200,000	6,782,940
Network Software	20,000	40,000	50,000	65,000	175,000
Network Staff	95,000	210,060	325,000	350,000	980,060
Information Hardware	516,000	1,809,000	4,737,000	9,850,000	16,912,000
Application Software	250,000	2,000,000	2,800,000	2,200,000	7,250,000
Application Staff	95,000	355,000	475,000	490,000	1,415,000
Circuit Riders		1,200,000	1,800,000	2,400,000	5,400,000
Installation Staff		1,300,000	2,535,000	2,600,000	6,435,000
TOTALS	1,488,000	8,129,000	14,578,000	21,155,000	45,350,000

Application software dollars will be used to acquire new third-party software, award contracts and grants to school districts to build "cross walks" to existing software, and to contract for the development of specific software components not already available.

Application staff dollars include both Department of Education staff members and contracts with private firms for additional resources as required.

VII. IMPLEMENTATION PHASES (TIME LINES)

As stated in Section V.A, more money and more people will not compress the time lines beyond those reflected in this section.

The five phases outlined in this plan do not coincide with fiscal year beginning and ending points. It would not be practical to attempt a correlation between phases and fiscal years because the overall complexity of the FIRN project, with its seven inter-related resources, would inherently work against such an attempt and because the phases need to be considerably overlapped. The "FIRN PHASES" **must** drive the implementation and funding activities. Therefore, this plan recommends that the Legislature, Department of Education and Council begin making plans and taking action to insure that an adequate level of all seven essential FIRN resources and funding are available during each phase of implementation. This plan recommends the following phased or building-block implementation strategy and milestones.

```
    81-82    82-83        83-84        84-85       85-86
PH  MAMJ JASONDJFMAMJ JASONDJFMAMJ JASONDJFMAMJ JASONDJF....
I   x

II  xxxx xxxxxxxxxxxx xx

III              xxxx xxxxxxxxxxxx xx

IV                            xxxx xxxxxxxxxxxx xxxxxxxx

V                                                xxxxxxxx....
```

Provisions should be made to enable funds to be carried forward between fiscal years to promote effective and efficient staff, contract and grant administration.

It should be noted that since Phase II begins during March of 1982, the required dollars will need to be derived by the Department of Education through a combination of identified "network" dollars plus re-appropriated funds. This activity will need to be successfully conducted by DOE management, or Phase II, and therefore the entire FIRN project, will lag behind the schedule put forth in this plan.

VIII. FIRN ADVISORY, POLICY AND STAFFING CONSIDERATIONS

The management of the FIRN, during the formative stages and later when it is fully operational, is very important to its success. This plan primarily addresses 2,345 schools, 67 school districts, the Department of Education and the Florida Legislature. Therefore, the FIRN advisory and policy recommendations of the plan will be stated primarily from a public school (K-12) standpoint. However, it should be recognized that a broad governance structure is being presented and that the structure will facilitate the inclusion of other educational delivery systems (State University System, Community Colleges and Vocational Education) at a later point in time, without requiring major modification.

The Council, as the representative coordinating body for the M.I.S. endeavors of the entire public school base, **MUST** be an integral part of all FIRN planning, policy-setting, managing and operating activities indefinitely. As part of this plan, the Council will form several coordinating committees which will interact with Department of Education sections assigned responsibility for: 1) Network Hardware/Network Software, 2) Information Application Software and 3) Information Processing Hardware (state-wide bids and recommended $15,000 review procedure). These three new Council committee activities, and the existing Data Review Committee's charge, can be logically related to the seven FIRN resources discussed in Section IV.D of this plan more specifically as follows:

<u>Network Hardware/Network Software/Network Technical Staff</u>

In essence, these are the resources of the "railroad" (reference the analogy in Section IV.C) and as such, they should be viewed as serving the entire Florida system of public education, i.e., all four delivery systems. Because of this, these resources should be located on the Commissioner of Education's staff as a section/project reporting <u>directly</u> to the Associate Deputy Commissioner. This staff should manage the Network Technical Support Center which should be located at the Northwest Regional Data Center. A Network Technical Staff member should also be located at each **node** in the network reporting directly to the director of the section/project. It is essential that the Council assist the Commissioner and Associate Deputy Commissioner in providing guidance and direction to the section/project.

Having established an administrative structure for the railroad (**network**), attention can now be focused on the resources which will create, maintain and move **information freight** on the tracks (**communication lines**) of the network.

Information Base/Data Review Committee

Any change to the information base which school districts will be required to maintain for the Florida Department of Education must be reviewed by the Data Review Committee and approved by the Management Information Service section of the Division of Public Schools prior to implementation. Any ad hoc requests for information from school districts, which fall outside pre-established guidelines, will also need to flow through this review procedure.

In order to effectively implement the procedures to insure the integrity of the FIRN, the Data Review Committee recommends:

- The development of a cost estimating method and procedure for assessing the potential impact of legislation on FIRN activities. This method would also be used by the Data Review Committee and the MIS section in determining the cost of implementing new or revised data collection activities within school districts and the Department.

- The Department, in cooperation with the Legislature and the Governor's Office, identifies necessary changes in FIRN activities as early in the fiscal year as possible.

Information Processing Hardware

The Information Processing Hardware base which exists today is an outgrowth of the grass-roots sharing arrangements of the past four years. School districts, community colleges and SUS-regional data centers have joined forces to form many shared or regional Information Processing Hardware resources. Two examples include; five districts (with five more in the initial stages of joining) utilizing a facility at Putnam County School District and eleven districts linked to the resources of the SUS-Northwest Regional Data Center. This plan recommends the continued support of existing centers and the formation of additional host sites. Each center should be established as an auxiliary, independent of any particular district or institution except for the relationship between the auxiliary and the entity acting as fiscal agent. Each user (district, community college or university) should have a representative, with one vote, on a Policy Board. The director of the center should report to the Policy Board. The directors of these centers should cooperate with the DOE Educational Technology Section to further the establishment of a more compatible Information Processing Hardware base throughout the State.

Information/Application Software and Information/Application Technical Staff

While there are many similarities between school district, community college, vocational education and university Information/Application Software, the differences require separate development efforts for the most part. Because of these differences, this plan recommends the establishment of an Information/Application Software "team" in the Division of Public Schools Bureau of Management Systems and Services. The full time members should initially include; Coordinator Financial Systems, Coordinator Student/Program Systems and a Coordinator Staff (Personnel) Systems. The "team" can be augmented with personnel from private firms as needed over time. This "team" should rely heavily on the advice and guidance of the Council and Data Review Committee. The "team" should concentrate on ever changing user needs and associated functional designs rather than systems development, which inevitably leads to system maintenance, which in turn can require an awesome number of man-hours.

The "team" should develop functional Information/Application Software specifications for all levels within the Educational Information Hierarchy (reference Appendix B). These specifications should then be used as a criteria for the selection of third-party software to meet the perceived Student/Program, Staff, Finance, Facility and Community information needs at the schools, districts and the State (reference Section IV.D.6).

The "team" should develop Information/Application Software for those needs which can not be adequately addressed by third-party software. Any such "development" should follow a rigid set of system design, programming and documentation standards to insure a quality end-product!

It is very important that this "team" remain in constant communication with the Council, Data Review Committee, Network Hardware/Network Software staff and Educational Technology Section to insure that the pieces (resources) of the FIRN will form a logical and functional whole.

The relationship between the Council Committees and the Department of Education projects/sections can perhaps be better conveyed in this illustration:

LEGISLATURE
STATE BOARD OF EDUCATION
COMMISSIONER OF EDUCATION

COUNCIL		DOE
FIRN COORDINATING COMMITEE	⟷	ASSOCIATE DEPUTY COMMISSIONER
NETWORK HARDWARE AND SOFTWARE COMMITTEE	⟷	NETWORK HARDWARE AND SOFTWARE TECHNICAL STAFF
INFORMATION PROCESSING HARDWARE COMMITTEE	⟷	EDUCATIONAL TECHNOLOGY SECTION
		DIVISION OF PUBLIC SCHOOLS
INFORMATION/APPLICATION COMMITTEE	⟷	MANAGEMENT INFORMATION SERVICES SECTION
DATA REVIEW COMMITTEE	⟷	DATA REVIEW COMMITTEE

This plan recommends that the Associate Deputy Commissioner be responsible for overall FIRN coordination, Network Hardware and Network Software, and Information Processing aspects of the FIRN because these are related to all educational delivery systems (school districts, community colleges, universities and vocational education).

It is recommended that those aspects related to Instrument Review, Data Review, and Information/Application Software be coordinated by the Management Information Systems Section within the Division of Public Schools because of the unique needs and characteristics of these resources in school districts.

The Council, working with the Commissioner's Office, will develop the specific membership composition of the committee and "teams" outlined in this section. Governance procedures developed for FIRN will follow State Board of Education Rules and legislative mandate.

IX. SECURITY AND PRIVACY

The Council considers the issue of security and privacy to be very important as it relates to the Florida Information Resource Network. There is concern about unapproved access to the "network". There is equal conern about the possibility of an authorized individual, unfamiliar with the data base, developing an "inaccurate" response to a question. Because of these and other concerns about the security and privacy of the FIRN, this plan recommends, with the support of the Council, the following:

1. That a Security/Privacy Plan be developed subject to the Rights of Privacy Act.

2. That data elements be made available in only a structured format through Phase III.

3. That data elements, which are not required at the State level, not be made available.

4. That only aggregate information be transmitted and/or made available to the State.

5. That the data elements reflected in Appendix D be considered essentially a "status report" of an on-going developmental effort.

6. That an "Access Log" be maintained on all attempts to retrieve information from the FIRN data base.

7. That the Security/Privacy Plan be updated annually and during each phase of implementation of the FIRN.

X. EVALUATION

There are two activities planned to fulfill the Council's commitment to conducting an in-depth on-going evaluation of the progress of the FIRN during each phase of implementation. These include:

The use of a survey document to determine how effective the FIRN has been at meeting the desired goals of each phase. This survey document will be sent to each user district.

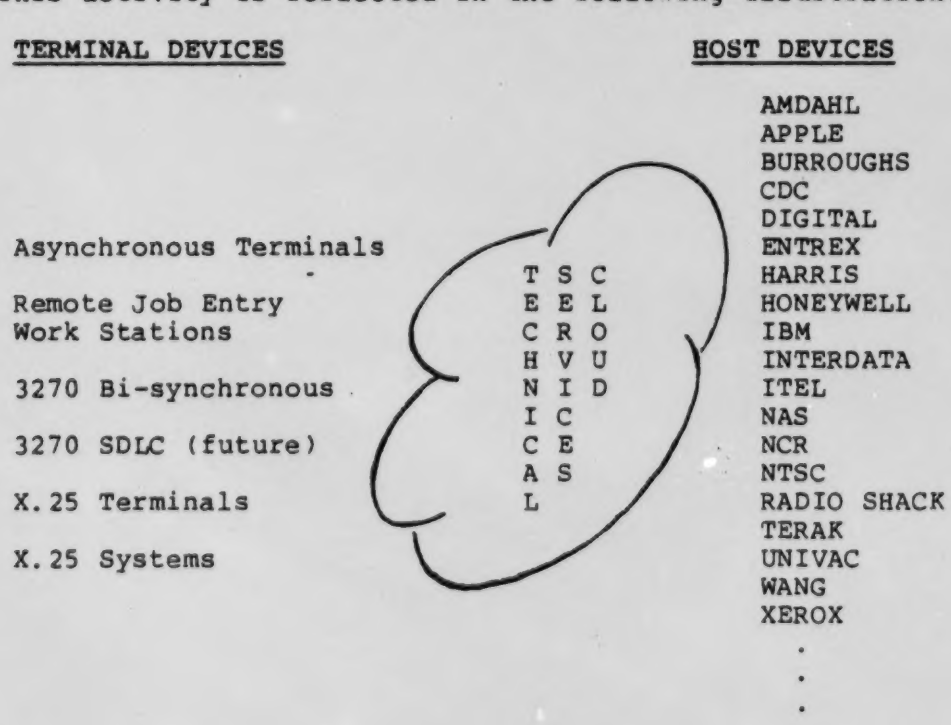
Development of a formal annual progress report for the Commissioner and Florida Legislature.

XI. TECHNICAL SUMMARY

An earnest attempt has been made to avoid the use of computer acronyms and technical terms throughout this plan. However, the purpose of this section is to provide the more technically oriented reader additional information about the Network Hardware and Network Software resources of the FIRN.

During the Summer of 1981, it was determined that the results of the 16 month study performed by the State University System could be used as a foundation for the FIRN concept. This would merge two divisions and lay the groundwork for a full function Florida Educational Computing Network. Appendix E reflects the SUS Request For Information (RFI) as it was sent to vendors; initial detailed evaluation performed by Glenn W. Mayne, Associate Director, Management Information Systems and the SUS Technical Network Committee; and a record of the vendor presentations to the SUS Network Committee. As indicated in Appendix E, a commitment exists to make the result a full educational network.

The Network Hardware and Network Software resources have been affectionately referred to as the "cloud" during technical brainstorm sessions. With the FIRN, packets of information will enter the "cloud" where upon the format and protocol characteristics will be altered so that they will be compatible with those at the destination point. This activity is reflected in the following illustration:



The technical services (cloud) which will be supported by the FIRN include:

- **Asynchronous Devices** Teletypewriter compatible terminals ranging in speed from 110 bits per second (bps) to 1200 bps. FIRN nodes will support dial-up and hard-wired ports and will enable users to define the desired terminal characteristics, such as parity and line feed, for each session.

- **Synchronous Multi-drop Devices** The FIRN will support 3271, 3275, 3276 or 3274 type terminal control units using bi-synchronous protocol on multi-drop phone circuits. It is also planned that the network will support System Network Architecture (SNA) devices during fiscal year 1982-1983. This support will be provided by using the Synchronous Data Line Control (SDLC) line discipline as SNA type 2 physical units providing services for logical units 0, 1, 2 and 3.

- **Synchronous Remote Batch Devices** The JES2/NJE (HASP) multi-leaved work station protocol will be supported using the binary synchronous line discipline. Bi-synchronous data streams with 2780/3780 characteristics will be supported by the FIRN.

- **Public Data Network Standards** Support will be available for devices conforming to the CCITT X.25 packet switching protocol according to the X.3, X.28 and X.29 interface specifications.

To facilitate school district use of the FIRN, any terminal, word processing station, micro-computer, mini-computer or main-frame computer equipment acquired in the future should have the ability to emulate one or more of the four types of technical services just described.

In addition, two major network technologies are being discussed by planners of the FIRN:

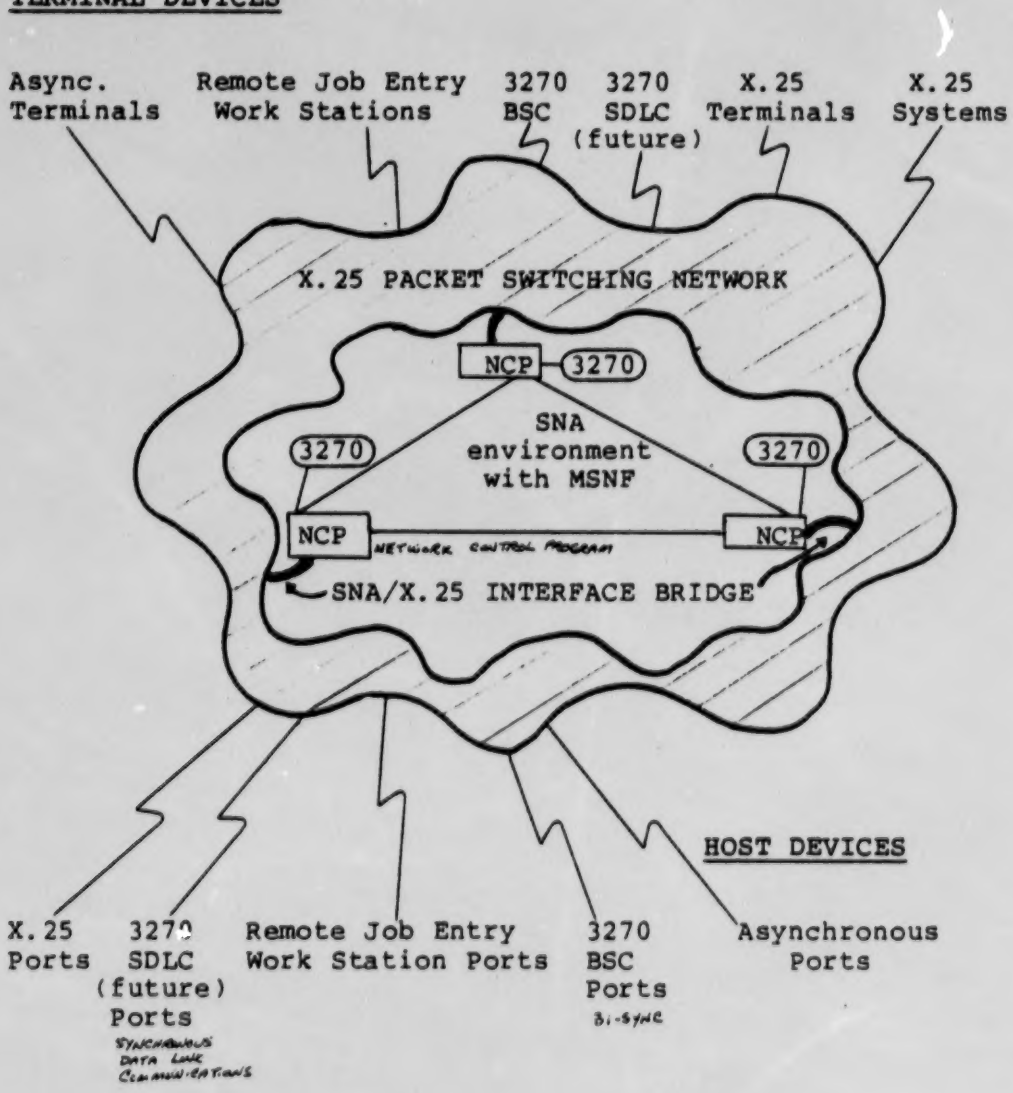
SNA

IBM's System Network Architecture, a combination of hardware and software designed to support full function networking for a wide range of IBM products.

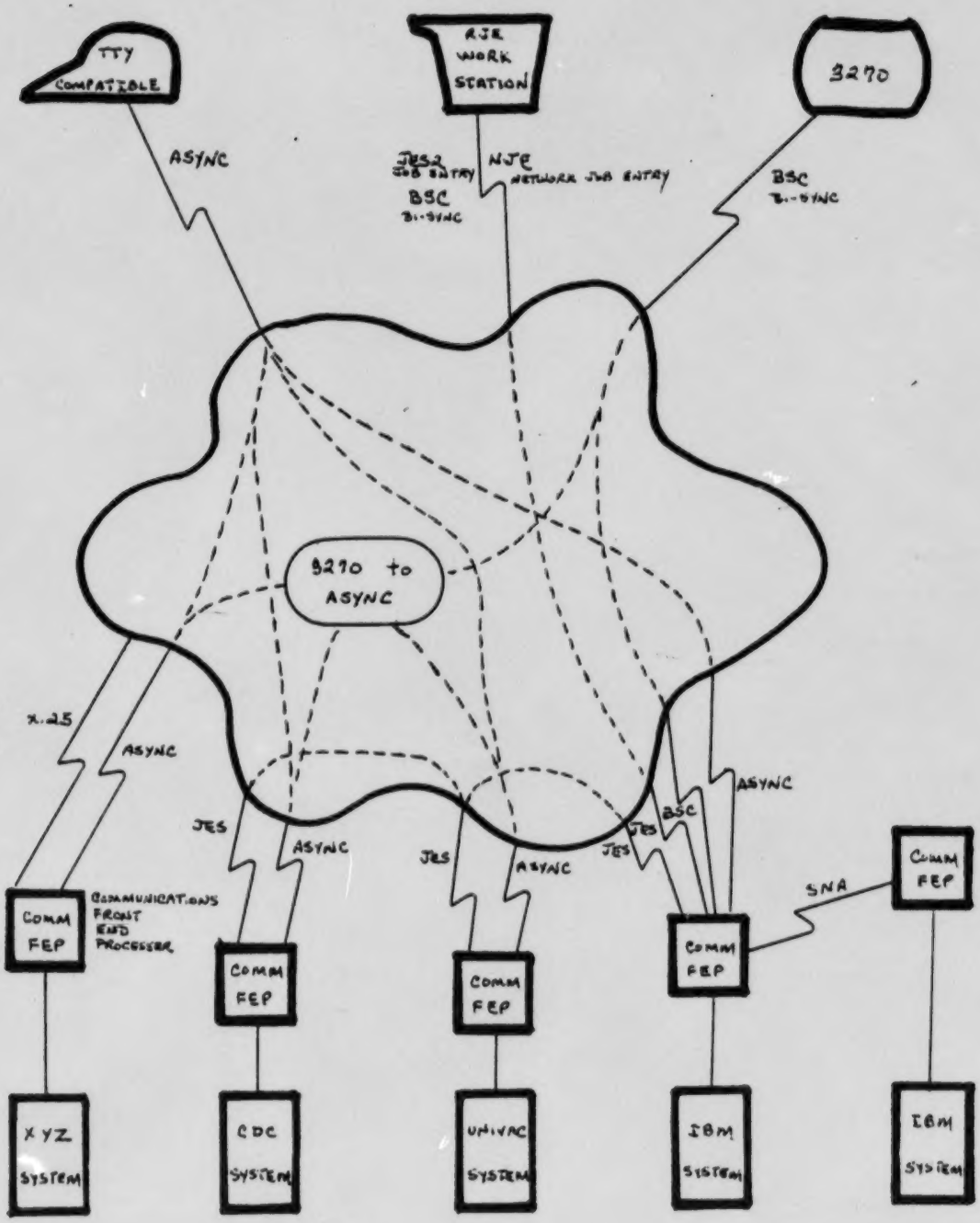
X.25

This network architecture is the provisional recommendation from the Consultative Committee on International Telegraph and Telephone (CCITT) standards for packet-switched data transmission services.

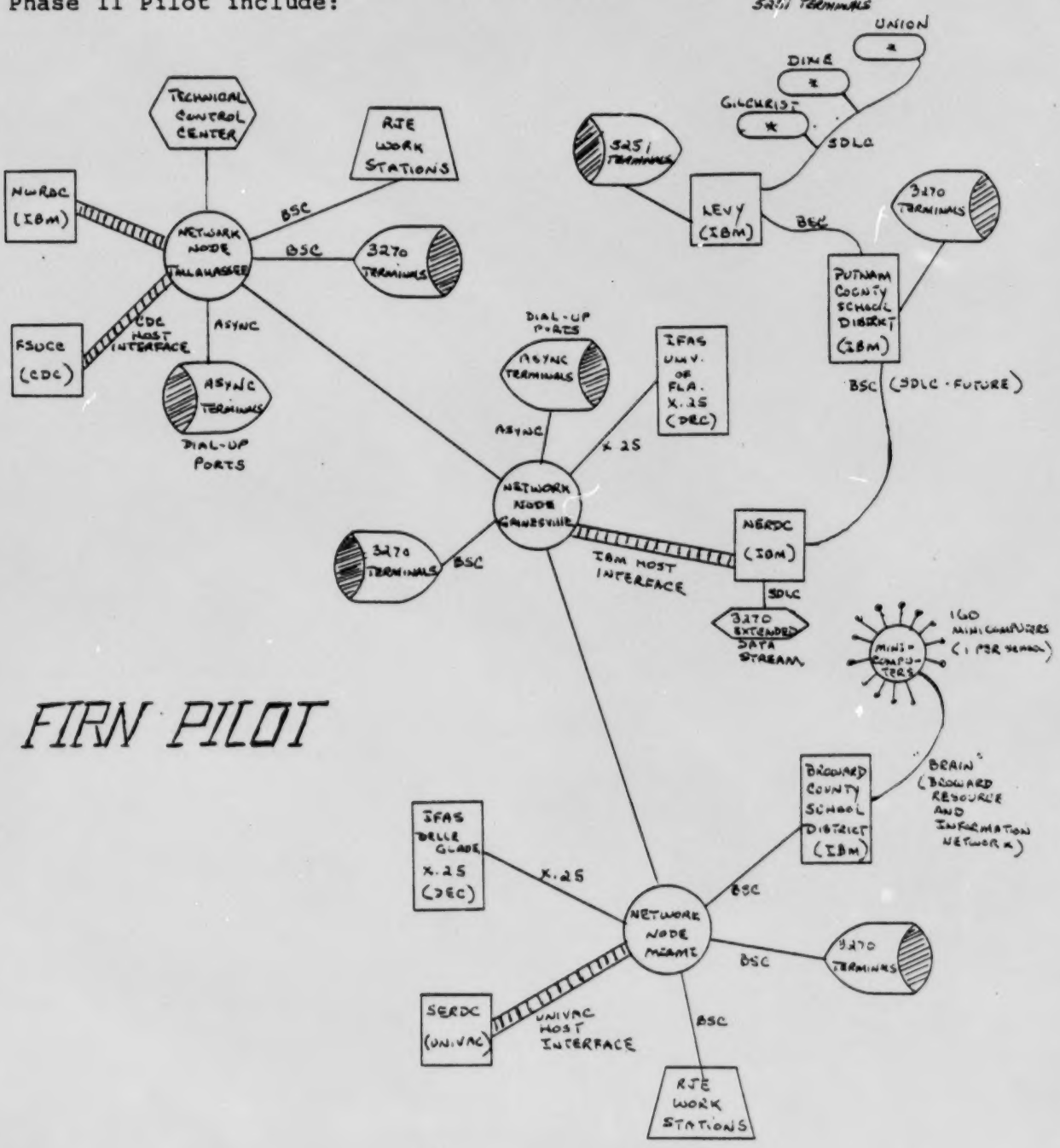
The following, is another pictorial representation of the technical services (concepts) which will be provided by the Florida Information Resource Network (FIRN):



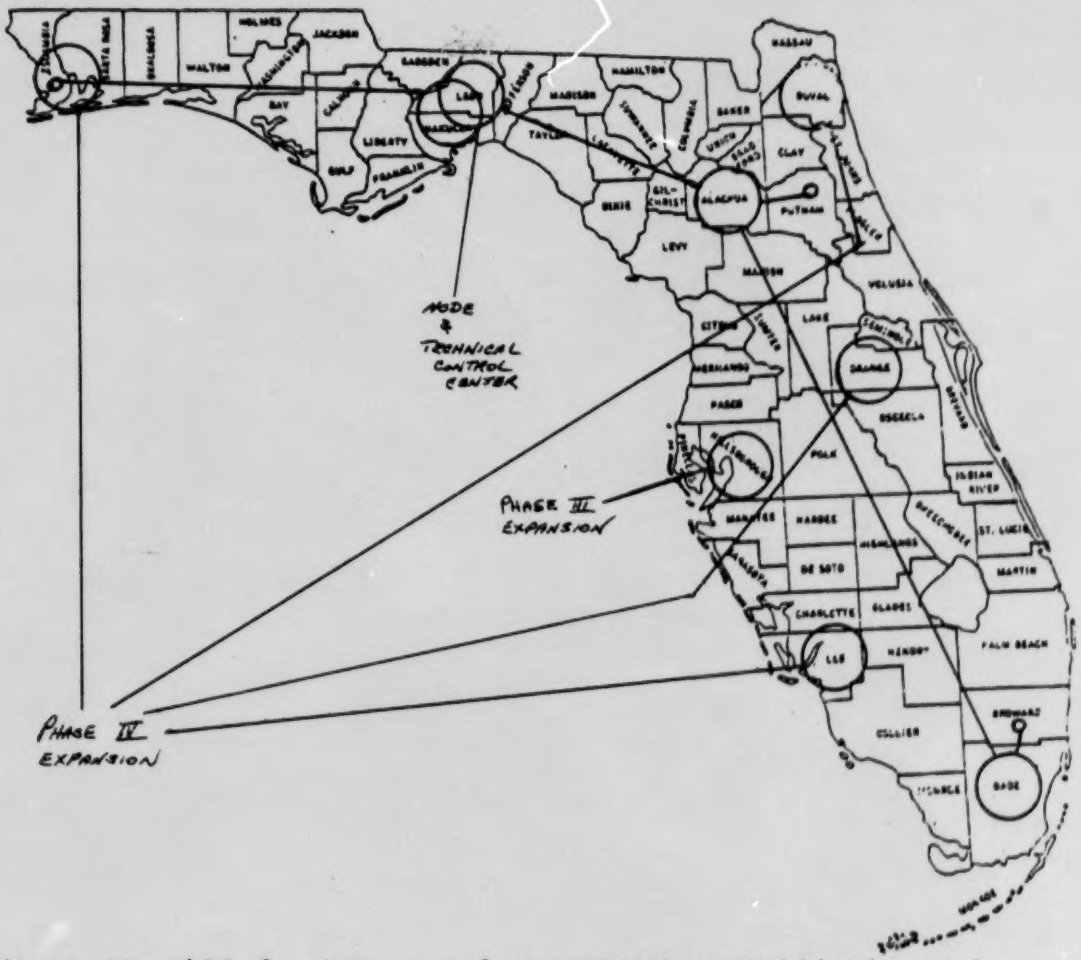
The following illustration reflects the "logical" paths which will be taken inside the "cloud":



During Phase II of the FIRN, a network pilot project will be conducted as described in Section V.C. A full one year "pilot" (**after providing approximately 6 months for Network Hardware/Network Software acquisition**) is essential to all future phases of the FIRN--in essence, **the existing resources and the "pilot" form the foundation of the FIRN!** The "technical services" which will be tested during the Phase II Pilot include:



As the FIRN moves into Phase III, a fourth node will be established in Tampa. Each time a node is added to the network an additional $100,000 will be required for start-up equipment, a person will be hired for that node and the on-going software and hardware maintenance costs will increase. During Phase III, it is estimated that the monthly on-going maintenance cost will be approximately $6,000. The network will resemble the following illustration:



Phase IV will further expand the FIRN by establishing nodes in Pensacola, Jacksonville, Orlando and Ft. Myers. The Technical Control Center (TCC) staff in Tallahassee will need to be expanded and another person will be stationed at each new node in the network bringing the remote or node staff reporting to the TCC to a total of eight persons. The 67 school districts will be either be directly or indirectly (routed through host) to these eight nodes in the FIRN state-wide.

Having taken interactive ad hoc FIRN services to the 67 school districts in Phase IV, these functional computing services will now be expanded to all 2,345 schools during Phase V. A significant cost during this phase will be for the acquisition of terminals and/or micro-computers for all of these schools and the communication lines/modems required to link these school-based terminals and/or micro-computers to district facilities.

A diagram of the FIRN after completion of Phase V would be quite involved since the Florida system of public education will have in place, at a minimum:
1 Technical Control Center in Tallahassee;
5 SUS-Regional Data Centers;
8 Network Nodes in cities throughout the state;
20 School District and/or Regional Data Centers;
67 School Districts with equipment linked to the FIRN;
2,345 Schools linked to the FIRN via district facilities;
9 State Universities linked to the 5 SUS-Regional Centers;
and an undetermined number of Community Colleges linked to nodes in the FIRN.

The 20 school districts and/or regional data centers, mentioned earlier, will be identified by the Council and Department of Education as the FIRN evolves. However, the following entities can **tentatively** be identified:

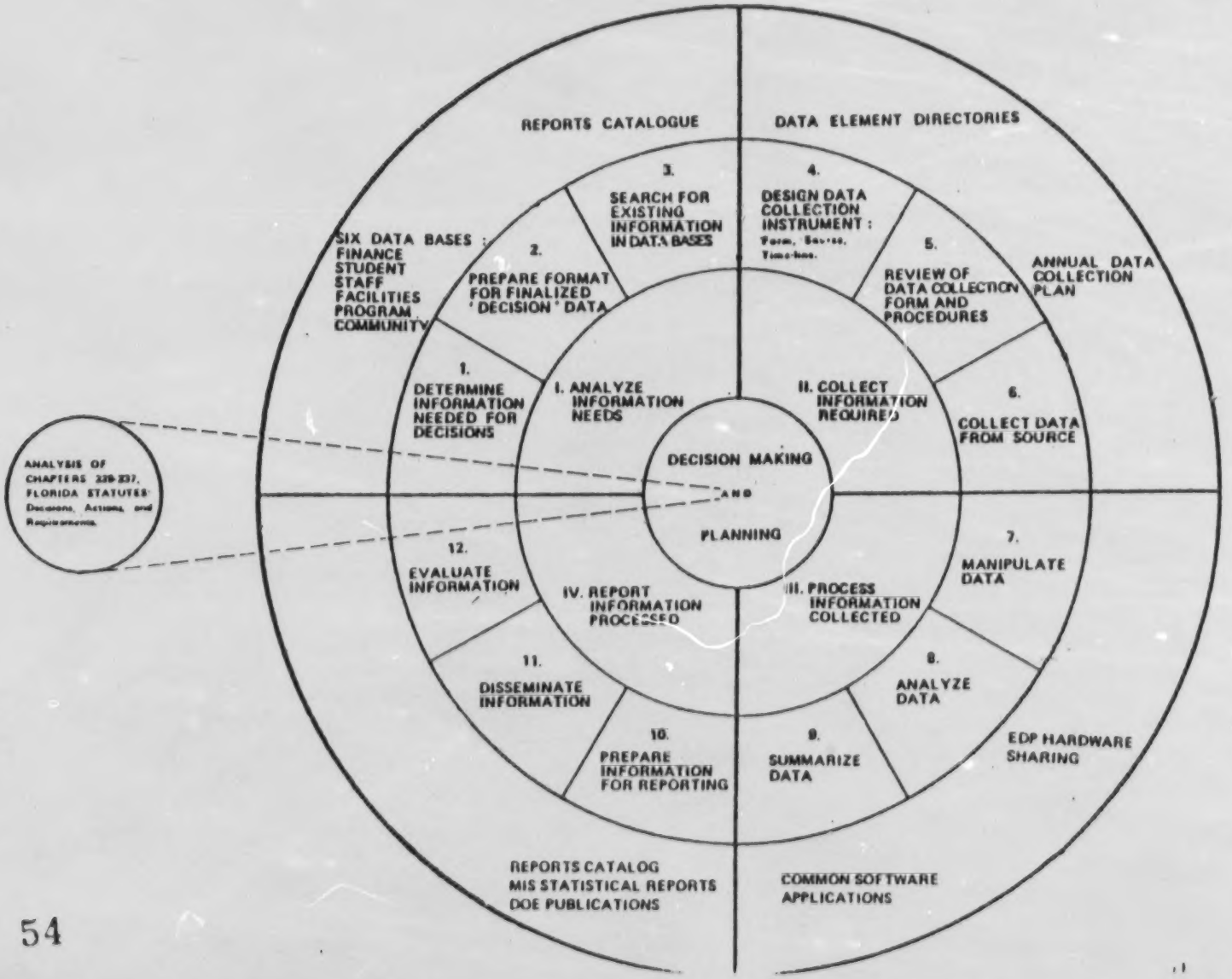
1. Dade
2. Broward
3. Palm Beach
4. Lee
5. Brevard
6. Polk
7. Hillsborough
8. Pinellas
9. Orange
10. Seminole
11. Volusia
12. Putnam
13. Duval
14. NERDC or Alachua
15. Bay
16. NWRDC
17. Escambia or Santa Rosa
18. Sarasota
19. Indian River
20. Clay or St. Johns

The identification of these entities in this plan is to provide future Phase III, Phase IV and Phase V planners a base from which to work. Districts such as Martin, St.Lucie, Manatee, Marion, Hernando and Leon could become one of the 20 centers while districts tentatively listed may not be centers in the final analysis.

Very extensive Information/Application Software will be operational at all the schools and school districts by the close of Phase V. Even though the seven essential FIRN resources will have been addressed, it will still be necessary for the educational system to undertake one of the most ambitious on-going training programs ever conducted. The objective of this training program will be to insure that the many users of the FIRN understand the services and facilities and how to best use them.

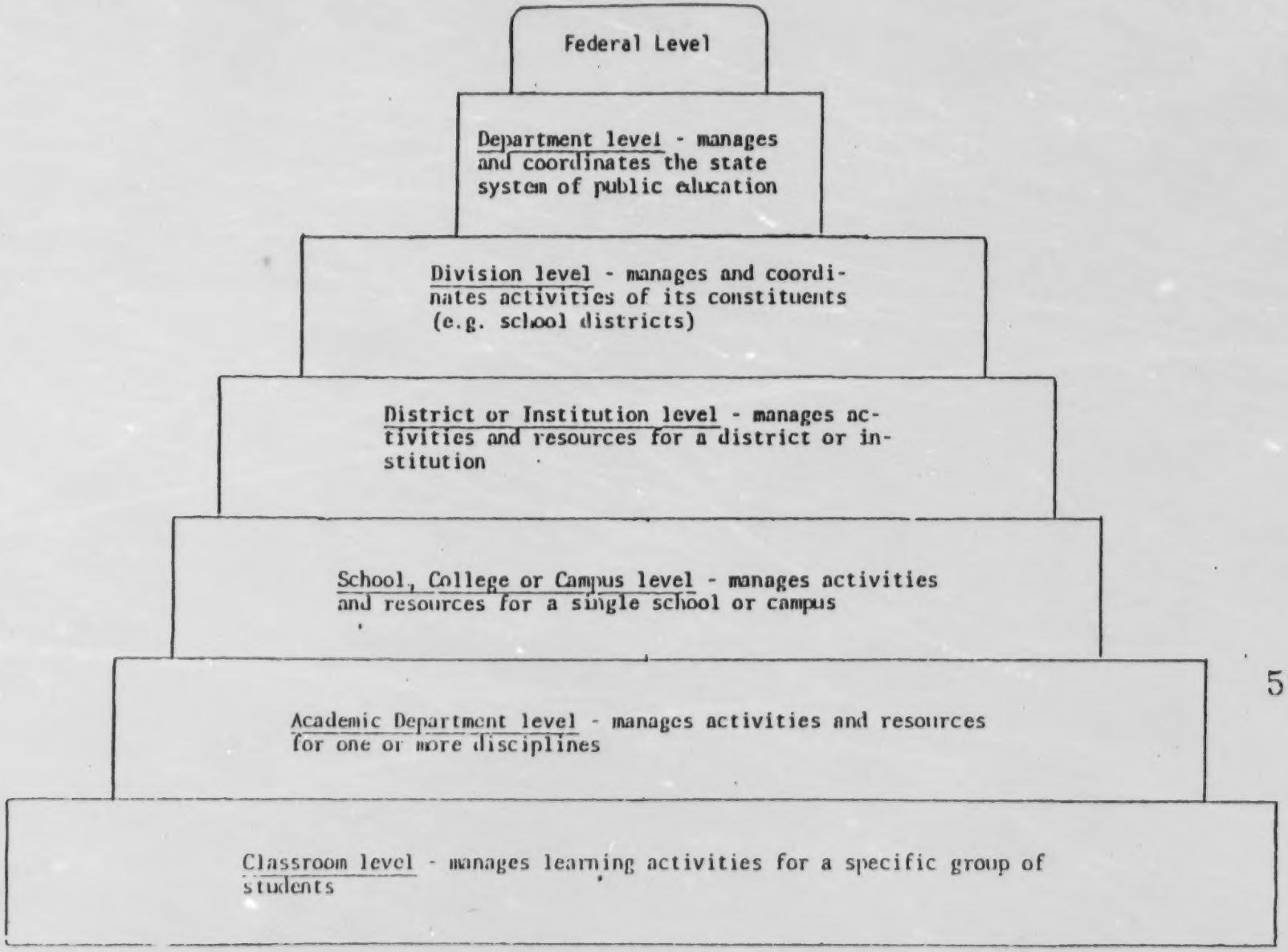
XII. A P P E N D I C E S

A Model for Management Information Systems


REPORTS CATALOGUE
DATA ELEMENT DIRECTORIES
SIX DATA BASES : FINANCE STUDENT STAFF FACILITIES PROGRAM COMMUNITY
1. DETERMINE INFORMATION NEEDED FOR DECISIONS
2. PREPARE FORMAT FOR FINALIZED 'DECISION' DATA
3. SEARCH FOR EXISTING INFORMATION IN DATA BASES
4. DESIGN DATA COLLECTION INSTRUMENT : Form, Source, Timeline.
5. REVIEW OF DATA COLLECTION FORM AND PROCEDURES
6. COLLECT DATA FROM SOURCE
ANNUAL DATA COLLECTION PLAN
I. ANALYZE INFORMATION NEEDS
II. COLLECT INFORMATION REQUIRED
DECISION MAKING AND PLANNING
III. PROCESS INFORMATION COLLECTED
IV. REPORT INFORMATION PROCESSED
7. MANIPULATE DATA
8. ANALYZE DATA
9. SUMMARIZE DATA
10. PREPARE INFORMATION FOR REPORTING
11. DISSEMINATE INFORMATION
12. EVALUATE INFORMATION
EDP HARDWARE SHARING
ANALYSIS OF CHAPTERS 228-237, FLORIDA STATUTES: Decisions, Actions, and Requirements
REPORTS CATALOG
MIS STATISTICAL REPORTS
DOE PUBLICATIONS
COMMON SOFTWARE APPLICATIONS

Levels of Education Served
by Management Information Systems

Appendix B


Federal Level
Department level - manages and coordinates the state system of public education
Division level - manages and coordinates activities of its constituents (e.g. school districts)
District or Institution level - manages activities and resources for a district or institution
School, College or Campus level - manages activities and resources for a single school or campus
Academic Department level - manages activities and resources for one or more disciplines
Classroom level - manages learning activities for a specific group of students

APPENDIX C.
CURRENT SCHOOL DISTRICT COMPUTING CAPABILITY

COUNTY	LEVEL (ref. III.A)	FTE

1. Alachua County 3 22,334

Alachua uses the Alachua County government IBM 370/148 which is funded jointly by several local governmental agencies. The school district has been evaluating the installation of its own computer hardware at a school district center. Two rather important keys to the future of Alachua's M.I.S. are; 1) either acquiring an equal voice in the present shared center operation or its own facility and 2) the development of a plan identifying the products (resources) for an integrated interactive information system addressing Student/Program, Staff and Finance.

2. Baker County 2 3,461

Baker has an NCR 499 used primarily to support its financial information procedures. Baker is one of the districts identified to receive State grant monies (Phase II) to assist with the acquisition of either terminal or micro-computer hardware, modems and a communication line to link to the Putnam County School District IBM 4331.

3. Bay County 3 20,605

Bay has a Data 100 link to the Northwest Regional Data Center. Through this arrangement, Bay has obtained access to substantial Information Processing Hardware resources and some Financial and Staff Information/Application Software.

4. Bradford County 1 4,331

Bradford has an IBM System 3 which is used primarily for instructional computing. Bradford is one of the districts identified to receive State grant monies (Phase II) to assist with the acquisition of either terminal or micro-computer hardware, modems and a communication line to link to the Putnam County School District IBM 4331.

5. Brevard County 5 47,902

Brevard has an IBM 4341 with an extensive communications network. The district-wide teleprocessing network includes a terminal in every school (63) plus 23 terminals for district level operations. Applications include automated FTE, student scheduling, grade reporting, suspension data, student membership, payroll, purchasing, budget and man power control. Ad hoc information retrieval capability is available with some systems. Approximately 120 micro-computers have already been purchased for computer managed instruction, computer assisted instruction and administrative tasks.

COUNTY	LEVEL (ref. III.A)	FTE

6. Broward County — 5 — 140,006
Broward has an IBM 4341 and an IBM 370/145. Broward is in the process of installing a county-wide mini-computer distributed computing network.

7. Calhoun County — 2 — 2,134
Calhoun has an NCR 399 which is used to support financial procedures. Calhoun is one of the districts identified to receive State grant monies (Phase II) to assist with the acquisition of either terminal or micro-computer hardware, modems and a communication line to the Northwest Regional Data Center's Amdahl.

8. Charlotte County — N/A — 8,189
Charlotte has an NCR 8450.

9. Citrus County — N/A — 9,067
Citrus has an IBM System 3 model 8.

10. Clay County — N/A — 16,562
Clay has a Datapoint.

11. Collier County — N/A — 15,087
Collier has a Digital PDP-11/40.

12. Columbia County — 3 — 7,383
Columbia shares an IBM System 34 with Lake City government and a local public hospital.

13. Dade County — 5 — 263,215
Dade has a NAS 7000 and an extensive network of terminals district-wide. Dade has recently acquired a substantial number of mico-computers for instructional computing.

14. Desoto County — N/A — 4,411
Desoto has an NCR 399 and a link to Lee County School District via an IBM 3276 and printer.

15. Dixie County — 4 — 1,642
Dixie has a video and hardcopy terminal linked to Levy County School District's IBM System 34 which inturn is linked to the IBM 4331 at Putnam County.

16. Duval County — 5 — 99,156
Duval uses the B-7700 at Jacksonville's Consolidated Data Center.

17. Escambia County — N/A — 43,158
Escambia has a B-2930.

18. Flagler County — 3 — 2,040
Flagler has an IBM System 34 and is considering linking it to the IBM 4331 at Putnam County School District.

COUNTY	LEVEL (ref. III.A)	FTE

19. Franklin County — N/A — 1,861
Franklin is identified as one of the districts which will receive State grant monies during Phase II to acquire equipment which will be linked to the Northwest Regional Data Center.

20. Gadsden County — 3 — 8,447
Gadsden has Telex terminals linked to the Northwest Regional Data Center.

21. Gilchrist County — 4 — 1,538
Gilchrist has a video and hardcopy terminal linked to the IBM System 34 at Levy County School District which is inturn linked to the IBM 4331 at Putnam County School District.

22. Glades County — N/A — 1,011
Glades has a terminal linked to the IBM 4331 located at Lee County School District.

23. Gulf County — 3 — 2,440
Gulf is presently using an NCR 499 for payroll and financial accounting. Gulf is in the process of linking a Telex 277-D display terminal and a Telex 289 line printer to the NWRDC. The NCR 499 will be phased out as soon as possible.

24. Hamilton County — 2 — 2,345
Hamilton is one of the districts identified to receive State grant monies during Phase II to acquire and install terminal and related equipment which will tentatively be linked to the IBM 4331 located at Putnam County School District.

25. Hardee County — 3 — 4,419
Hardee uses two (2) Burroughs striped ledger accounting machines for payroll and financial procedures. Three (3) terminals linked to the IBM 4331 located at Lee County School District provide cost accounting services for the entire district and student services for two (2) secondary schools.

26. Hendry County — 3 — 5,122
Hendry has a B-800 which is used jointly with the county government.

27. Hernando County — 3 — 7,884
Hernando County uses the B-1700 installed at the county government facility. Hernando is one of the districts identified to receive State grant monies during Phase II to acquire terminals and related equipment to link to the B-1700 to move from a batch environment to an on-line environment.

28. Highlands County — 3 — 7,607
Highlands has terminals linked to the IBM 4331 located at Lee County.

COUNTY	LEVEL (ref. III.A)	FTE

29. Hillsborough County 5 118,088
Hillsborough has an IBM 4341 and extensive Information/Application Software.

30. Holmes County 2 3,392
Holmes has an NCR 399. Holmes is one of the districts identified to receive State grant monies during Phase II to acquire terminal equipment which it will tentatively link to the Northwest Regional Data Center.

31. Indian River County 3 9,206
Indian River is upgrading its B-1726 to a B-1955. Indian River's district-wide network of on-line terminals is used to provide pupil and administrative support. Computer managed instruction will be provided by the same network beginning in fiscal year 1983. Indian River serves as a host to several other school districts.

32. Jackson County 3 8,038
Jackson has an NCR 399. Jackson also has terminals linked to the Northwest Regional Data Center.

33. Jefferson County 3 2,185
Jefferson has a link to the Northwest Regional Data Center.

34. Lafayette County 1 938
Lafayette is one of the school districts which is indentified to receive State grant monies during Phase II to acquire terminal or micro-computer equipment to link to the IBM 4331 at Putnam County School District.

35. Lake County 3 18,372
Lake has an IBM 4331 and has installed the TERMS Student Information Series for its use. Lake has also installed the TERMS Staff Series for use by Sumter County School District which has terminals linked to the Lake facility.

36. Lee County 5 31,925
Lee County has an IBM 4331, extensive Information/Application Software and acts as a provider to many neighboring school districts.

37. Leon County 4 25,115
Leon shares an IBM 4331 with Tallahassee Community College and Lively Vocational-Technical School.

38. Levy County 4 3,989
Levy has an IBM System 34 and terminals located in its district office as well as a multi-drop SDLC line to terminals located a Gilchrist, Dixie and Union. On the other side, Levy has a 4800 baud line for interactive support and a 9600 baud line for remote batch going to Putnam County School District. Levy has been acting as a secondary or satellite provider to several schools districts for the past year.

COUNTY	LEVEL (ref. III.A)	FTE

39. Liberty County 3 983
Liberty currently has an NCR 399. Recently, Liberty acquired a terminal which is linked to the NWRDC. However, no data is being transmitted at this time.

40. Madison County 9 3,295
Madison has an NCR 399 linked to the Northwest Regional Data Center.

41. Manatee County 3+ 22,395
Manatee has an IBM 4341 which it shares with Manatee Community College.

42. Marion County 3+ 23,377
Marion has an IBM System 38.

43. Martin County 3 9,542
Martin has a Burroughs B-800 located at Martin County High School which is linked to a Burroughs B-900 at the district office.

44. Monroe County 3 8,595
Monroe has an IBM System 34 which it may consider linking to the Dade County School District NAS 7000.

45. Nassau County 3 7,282
Nassau has a B-700. Nassau is also one of the school districts identified to receive State grant monies during Phase II for the acquisition of terminals or micro-computers and related equipment which will tentatively be linked to the Northwest Regional Data Center via a Duval (University of North Florida) node.

46. Okaloosa County 3+ 23,857
Okaloosa has an IBM 370/115.

47. Okeechobee County 2 4,879
Okeechobee has an NCR 499. Okeechobee is also one of the school districts identified to receive State grant monies during Phase II for the acquisition of terminals or micro-computers and related equipment.

48. Orange County 5 86,172
Orange has an IBM 3031 with an extensive network of on-line terminals throughout the school district. Orange serves as a provider of the Discover Career Guidance System to high schools within the district and to some at several neighboring districts. Orange County's use of micro-computers for instructional computing purposes has been expanding rapidly during the recent year.

49. Osceola County 3 9,710
Osceola has a B-1955.

COUNTY	LEVEL (ref. III.A)	FTE

50. **Palm Beach County** 5 77,245
Palm Beach has an IBM 370/138 and an IBM 4341, extensive Information/Application Software and has recently started development of a micro-computer based distributed computing network district-wide.

51. **Pasco County** 3+ 28,456
Pasco has a Honeywell 6240.

52. **Pinellas County** 4+ 96,294
Pinellas has a Honeywell 6620.

53. **Polk County** 4 62,323
Polk has an IBM 4331 with both in-house developed Information/Application Software and the TERMS Student Information Series.

54. **Putnam County** 5 9,911
Putnam has an IBM 4331 with the TERMS Student, Staff and Financial Information Series operating on it. Putnam acts as a primary provider of functional computing resources to Dixie, Gilchrist, Levy and Union county school districts. Plans are currently being made for the possible addition of Flagler, Lafayette, Hamilton, Baker and Bradford county school districts.

55. **St. Johns County** 3 10,627
St. Johns has a B-1700.

56. **St. Lucie County** 3+ 14,900
St. Lucie has an NCR 8550.

57. **Santa Rosa County** 4 12,380
Santa Rosa has an IBM System 3 model 10 linked to the NWRDC. This school district also has 3 Telex video terminals and 2 Telex printers linked to the NWRDC.

58. **Sarasota County** 4+ 26,808
Sarasota has an NCR 8455 VRX system and an NCR 8555 VRX system, an extensive inventory of Information/Application Software and a district-wide network of terminals used to provide Computer Assisted Instruction (CAI).

59. **Seminole County** 4 37,354
Seminole has an IBM System 3 model 15 and is expecting an an upgrade. Current equipment includes thirty-three terminals located at middle schools, high schools and county office locations. On-line applications are being provided in the areas of finance, personnel, payroll, in-service education, food service, and secondary student grade reporting, master scheduling, and locator information.

COUNTY	LEVEL (ref. III.A)	FTE

60. Sumter County 3+ 4,702
Sumter County has terminals linked to the IBM 4331 located at Lake County to enable Sumter to utilize the TERMS Staff Series.

61. Suwannee County 2 4,860
Suwannee has an NCR 499. Suwannee is also one of the districts identified to receive State grant monies during Phase II to acquire terminals which will be linked to the Northwest Regional Data Center.

62. Taylor County 3+ 3,585
Taylor has terminals linked to the Northwest Regional Data Center and uses the Financial Information/Application Software resident there. Taylor also has an NCR 399 which it plans to phase out over time.

63. Union County 4 1,466
Union has a video and hardcopy terminal linked to the Levy County School District IBM System 34 which inturn is linked to the IBM 4331 at Putnam County School District.

64. Volusia County 4 36,170
Volusia has an IBM 4331.

65. Wakulla County 3 2,550
Wakulla has terminals linked to the Northwest Regional Data Center, MSA's payroll and Okaloosa's food service application software.

66. Walton County 3 3,633
Walton has terminals linked to the Northwest Regional Data Center.

67. Washington County 3 4,291
Washington has a Data 100 linked to the Northwest Regional Data Center.

JANUARY 1982 DRAFT
OF
DATA ELEMENTS

DEFINITIONS

USE Column:

1 - Indicates that this element is required to be maintained at the District in standard format for submittal to the State in this form.

2 - Indicates that the element is required to be maintained at the District in standard format. It does not have to be submitted to the State under current reporting conditions, but has a statutory basis for maintenance.

3 - Indicates that this element is not mandatory, but if automated, must use standard format.

TYPE Column:

A - An element which can be considered to be a student "attribute" as opposed to a course, program or system attribute.

B - An element which is specific to a program or a project.

C - An element which is general (generic) and may be repetitious over a variety of programs, projects or events.

X - An element which can either be derived, as necessary, from the system or is discretionary to system/programming techniques.

NUMBER OF CHARACTERS Column:

Spaces needed in the data field for this particular element.

FIELD TYPE Column:

A - Alphabetical

N - Numerical

A/N - Alpha/Numeric (either or both)

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
ABSENCE, DATE OF	3	A	6	N	The date the student is not in attendance during a given membership period, e.g., MM/DD/YY. *Note: Attendance (days present) is done by exception derived from this element.
ADULT PROGRAMS SEPARATION CODE	2	B	2	N	A code to indicate the reason the student separated from adult education program. 01 To take a job (unemployed at time of enrollment). 02 To take a better job (employed at time of enrollment). 03 To enter another training program. 04 Met personal objective 05 Lack of interest. 06 Health problem. 07 Transportation problem. 08 Child care progiem. 09 Family problem. 10 Problem with time course/program is scheduled. 11 Other reason. 12 Unknown reason.
ASSIGNMENT CODE	3	A	1	N	A code to indicate the reason for a student to be assigned to a school. 1 Original assignment. 2 Continuing assignment (original assignment to this school then left county and subsequently returned to same school in county where previously assigned). 3 Exceptional student assigned to school outside geographical attendance area. 4 Change of residence (hardship). 5 No bus transportation (hardship). 6 Recommendation of qualified psychiatrist, psychologist, physician, or juvenile court officer. 7 Educational reasons. 8 Unusual circumstances.
BIRTH VERIFICATION CODE	1	A	1	N	The type of evidence whereby birthdate is verified. 1 Birth Certificate. 2 Baptismal Certificate 3 Insurance policy on child's life. 4 Bible Record. 5 Passport. 6 School Record. 7 Affidavit.
BIRTHDATE	1	A	6	N	The date of birth of the student, e.g., MM/DD/YY.
BIRTHPLACE	2	A	20	A	The city, state and country in which the student was born.
BUS NUMBER	3	A	3	A/N	The number of the school bus to which the student is assigned.
BUS ROUTE NUMBER	1	A	4	A/N	The number assigned to the school bus route.
BUS RUN NUMBER	1	A	1	N	The number of a school bus run when the route considered to comprise more than one run.
CLASS BEGIN DATE	2	B	6	N	The first date a class is officially in session e.g., MM/DD/YY.
CLASS BEGIN TIME	2	B	6	N	The time of day the class begins, e.g., 0800=8:00 AM, 1300=1:00 PM, etc.
CLASS CREDIT	2	A	2	N	Value of credit that may be earned by a student in a specific class.
CLASS DAYS OF WEEK	2	B	6	A	Days of week the class meets: M Monday T Tuesday W Wednesday R Thursday F Friday S Saturday

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
CLASS END DATE	2	B	6	N	The last date a class is officially in session, e.g., MM/DD/YY.
CLASS END TIME	2	B	4	N	The time of day class ends. (See element CLASS BEGIN TIME for examples)
CLASS INSTRUCTOR	2	B	4	N	Teacher ID Number.
CLASS LOCATION, BUILDING	2	B	2	N	The building number (as assigned by FISH).
CLASS LOCATION, ROOM	2	B	4	A/N	The room number (as assigned by FISH).
CLASS LOCATION, TYPE	3	B	2	N	An indicator of the type of facility where the student is in physical attendance for class. 01 School Buildings: Elementary 02 School Buildings: Jr./Middle 03 School Buildings: Secondary 04 School Buildings: Comm. College/Tech Institute 05 Learning Center 06 Correctional Institutes 07 Hospital 08 Work Site 09 Other Locations (including universities).
CLASS NUMBER OF DAYS MET	2	B	3	N	The actual number of days the class met, during the term of the class.
CLASS PERIOD(S) OF MEETING	2	B	2	N	The time period(s) assigned during day by number.
CLASS RANK	3	X	4/4	N	The position where the student's grade point average places him in comparison to the number of students in the completion group.
CLASS SEATS, ORIGINAL	2	B	3	N	Number of seats in each individual classroom.
CLASS SECTION NUMBER	2	B	2	N	Number assigned by the school to each individual class section.
CLASS SETTING TYPE	2	B	2	N	A code to indicate the setting in which instruction is provided to a student. 01 Regular Classroom 02 Pullout 03 Learning Laboratory 04 Special Class 05 HRS Facility 06 Other State Institution 07 Hospital 08 Home 09 Mental Health Center 10 Private Residential Institution 11 After-School Class 12 Other
CONTINUING ED. INTENT CODE	1	A	1	N	An indicator to show continuing education status for graduating seniors 1 Florida Public Junior College 2 Florida Private Junior College 3 Florida Public Universities 4 Florida Private College & Universities 5 Florida Tech., Trade & Other 6 Non-Florida Tech., Trade & Other 7 Non-Florida Colleges & Universities
COURSE ADOPTION DATE	3	B	6	N	Date course was added to curriculum, e.g., MM/DD/YY.
COURSE CODE DIRECTORY NUMBER	1	B	8	N	A four digit number assigned by DOE to every course in which students are enrolled; 4 local fields optional.
COURSE CREDIT VALUE	3	B	4	N	Maximum credit value that a particular course can give a student.

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
COURSE DROPPED DATE	3	B	6	N	Date course was removed from curriculum, e.g., MM/DD/YY.
COURSE DURATION (TERM)	3	B	1	N	The coded identity of that portion of the school year for which course performance is evaluated. 1 First Semester 2 Second Semester 3 Year 4 Six-Week 5 Nine-Week 6 Twelve-Week 7 Other, Local
COURSE PRIORITY (REQ/ELEC)	3	B	1	A	Designates whether a course is required or an elective, e.g., R/E.
COURSE QUALIFIER GRD LVL	3	B	4	N	Defines lowest and highest grade levels that may be assigned to a course.
COURSE TITLE	2	B	20	A/N	Name of the course as assigned by district.
CREDITS ATTEMPTED (CUM)	3	X	4	N	Number of class credits a student could have received cumulative.
CREDITS ATTEMPTED (TERM)	3	X	4	N	Number of class credits a student could have received during a specific term.
CREDITS RECEIVED (CUM)	3	X	4	N	Number of class credits a student has actually received cumulative.
CREDIT RECEIVED (TERM)	3	X	4	N	Number of class credits a student has actually received for a specific term.
DATE OF RECORD UPDATE	3	C	6	N	Date of last change of student record, e.g., MM/DD/YY.
DISCIPLINARY ACTION, DATE	3	C	6	N	Date of disciplinary action, e.g., MM/DD/YY.
DISCIPLINARY ACTION, TYPE	1	B	1	N	A code to indicate the type of disciplinary action taken against a student. 1 In school suspension. 2 Out of school suspension. 3 Assigned to alternative program. 4 Corporal punishment. 5 Referred to court. 6 Expelled.
DISCIPLINE OFFENSE OR REASON	3	C	2	N	A code to indicate the offense or reason for student discipline. All that apply should be indicated. 01 Actual or threatened offenses against property. 02 Attendance or truancy. 03 Alcohol or smoking offense. 04 Attacked someone. 05 Carrying weapon. 06 Disrupting school activities. 07 Drugs. 08 Fighting. 09 Rape. 10 Riot or boycott. 11 Threatened violence. 12 Other.
DISTRICT NUMBER	1	A	2	N	2-digit number assigned by state.
ENTRY CODE, CURRENT SCHOOL	3	A	2	A/N	A code indicating the entry status of student during the school term. E1 Any student who has not previously, during the current school year entered any public school in this or any other state. E2 Any student from another state who has not previously, during the current school in this state, but who has, during the year been entered in a public school in the state from which the student came.

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
					R1 Student received from another room or attendance register within the same school. R2 Student received from another public school in the same district. R3 Student received from a public school in state, but outside district. R4 Student unexpectedly re-enters after withdrawal or discharge.
ENTRY DATE, CURRENT SCHOOL	2	A	6	N	The date the student was first enrolled in the school now attending, e.g., MM/DD/YY.
ENTRY DATE, U.S.A.	2	A	6	N	The date of entry of a foreign student into the United States, e.g., MM/DD/YY.
ESE ASSIGNMENT	2	A	6	N	Date of assignment to programs, e.g., MM/DD/YY.
ESE DISMISSAL BY PROGRAM	2	A	6	N	Date of dismissal from an ESE program (one of 18 identified programs) e.g., MM/DD/YY.
ESE EVALUATION DATE	2	A	6	N	Date the evaluation plan for the student has been completed, e.g., MM/DD/YY.
ESE INDIVIDUALIZED EDUCATION PLAN DATE	2	A	6	N	Date of most current Individualized Education Plan, e.g., MM/DD/YY.
ESE REFERRAL FOR EVALUATION	2	A	6	N	Date of completion of documentation that student was referred for exceptional student evaluation and has met the pre-referral and screening requirements according to the District Plan, e.g., MM/DD/YY.
ESE STAFFING HELD	2	A	6	N	Date ESE staffing held, e.g., MM/DD/YY.
ESE STAFFING SIGN-OFF	2	A	6	N	Date signed off by Administrator or designee, if different from above, e.g., MM/DD/YY.
ESE STUDENT ELIGIBILITY INDICATOR	2	A	1	A	An indicator to show that the student is eligible for an ESE program whether or not the student is receiving service, e.g., Y/N.
FEFP PROGRAM CODE	1	A	3	N	A 3-digit number as assigned by DOE to indicate the funding category of the course to which the student is assigned.
FOREIGN STUDENT NATIONALITY CODE	3	A	2	A	This indicates the student's nationality, if the student is other than a child of naturalized U.S. citizens. A student born to U.S. military personnel in a foreign country is not considered a foreign student and would therefore not need a foreign student nationality code. See attachment for nationality code.
FOREIGN STUDENT STATUS	1	A	3	A/N	This indicates the immigration status of a non-U.S. citizen student. For students on a visa, use V and their alpha/numeric status as assigned by Immigration. For student who are refugees, use R and the 2-Alpha code as given under nationality. For students who are permanent resident aliens, use PRA.
FTE QUALIFICATION STATUS	3	A	1	A	Whether or not student is qualified FTE by presence during count, e.g., Y/N.
GRADE COMPLETED	1	A	2	A/N	The highest grade successfully completed by student. PK Prekindergarten KK Kindergarten 01-12 Grade 1-12 13 Post-Secondary Vocational-Technical First Yr. 14 Post-Secondary Vocational-Technical Second Yr. 16 Pre-Apprenticeship Vocational-Technical 17 Apprenticeship-Vocational-Technical 20 Adult, General, Elementary 21 Adult, General,

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
GRADE COMPLETED DEFINITION CONTINUED					13 Adult Vocational; 22 Adult, General, Community Service
GRADE CURRENTLY ENROLLED	1	A	2	A/N	The grade level in which the student is enrolled. Code: PK Prekindergarten; KK Kindergarten; 01-12 Grades 1-12; 13 Post-Secondary Vocational-Technical First Yr.; 14 Post-Secondary Vocational-Technical Second Yr.; 15 Adult Vocational Technical Supplemental; 16 Pre-Apprenticeship Vocational-Technical; 17 Apprenticeship-Vocational-Technical; 20 Adult, General, Elementary; 21 Adult, General, Secondary; 22 Adult, General, Community Service
GRADE MARK	2	A	3	A/N	The recorded evaluation of a student's performance by academic course, alpha or numeric.
GRADE POINT AVERAGE	3	X	4	N	Total of evaluation received divided by total of credits attempted.
GRID LOCATION OF RESIDENCE	3	A	9	N	Geographic location of student residence by section, tract, block. *Note: 9 digit zip code may be so location specific as to eliminate the need for this field.
HANDICAPPED CONDITION	1	A	1	A	This code indicates whether a student is or is not handicapped regardless whether services are received as a result of the handicap. N No Handicap; Y Handicapped
HEALTH IMPAIRMENT	2	A	2	A	This is an indicator of whether the student has special or emergency type health problems for which the student may require medical or physical attention. See attachment for health impairment codes.
IMMUNIZATION STATUS	1	A	1	N	This code indicates whether or not a student meets immunization requirements. 1 Fully immunized; 2 Exempt medically; 3 Exempt religiously; 4 In-process
IMPACT ELIGIBILITY	3	A	1	A	Student is eligible for Federal impact aid, e.g., Y/N.
LANGUAGE PROFICIENCY (ENGLISH)	1	A	1	A	Student has limited or no ability to understand, speak, or read English and has a primary or home language other than English, e.,g., Y/N.
LANGUAGE, PRIMARY	1	A	2	A	The primary language spoken in the student's home, if other than English, which the student uses or speaks exclusively, or which the student uses or speaks more than English. See attachment for language codes.
LUNCH PROGRAM STATUS	1	A	1	N	An indicator to show student participation in the school lunch program. 1 Free; 2 Reduced; 3 Special; 4 Paid
MAILING ADDRESS	1	A	39	A/N	The current mailing address of the student, including city, state, and zip code, if different from residence address.
MEMBERSHIP DAYS	3	X	3	N	The total number of days the student was enrolled in school during the term.
MEMBERSHIP HOURS, DAILY	1	X	3	N	Number of hours, by the day of the week, student is in membership.

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
MEMBERSHIP HOURS, SPECIAL	1	X	3	N	Number of hours, daily, by program category, that student is in a special program other than basic.
MIGRANT STUDENT STATUS	1	A	1	A	An indicator to show student status as migrant or not, e.g., Y/N.
NAME, FULL LEGAL	1	A	37	A	The full legal name of the student, including: Last, Middle, and First, plus appendage, if any. Ex: Smith, Jr., John Leon Russell, Janine Mary
NAME, ALTERNATIVE	1	A	37	A	The name a student is/was known by, an assumed name.
NUMBER, STUDENT	1	A	10	N	The number assigned to the student for identification and record keeping purposes.
ORIGINAL ENTRY DATE	2	A	6	N	The date of the student's initial entry into the school district, e.g., MM/DD/YY.
PARENT/FATHER'S NAME	2	A	30	A	The name (last, first, middle initial) of the father of the student.
PARENT/MOTHER'S NAME	2	A	30	A	The name (last, first, middle initial) of the mother of the student.
PARENT/GUARDIAN NAME	2	A	30	A	The name (last, first, middle initial) of the person, if different from above, having legal guardianship of the student.
PARENT/GUARDIAN RESIDENCE	2	A	35	A/N	The current residence address of the legal guardian(s)of the student, whether parent or not, including street,city, state and zip, if different from student.
PROGRAM PARTICIPATION, SPECIAL	1	B	2	N	An indicator to show specific programs in which the student is a participant. See attachment for Program Participation, Special codes.
RACE/ETHNICITY	1	A	1	N	The racial/ethnic group to which the student belongs, appears to belong, or is regarded as belonging. W White, Non-Hispanic B Black, Non-Hispanic H Hispanic A Asian American/ Pacific Islander I American Indian/ Alaska Native
RECORDS LOCATION	3	A	4	N	The official school number (as assigned by the DOE) where records of the student are located if different from school student is attending.
RESIDENCE, STREET	1	A	14	A/N	The current street address of the student.
RESIDENCE, CITY	1	A	14	A	The current city of residence of the student.
RESIDENCE, STATE	1	A	2	A	The current state of residence of the student.
RESIDENCE, ZIP CODE	1	A	9	N	The current zip code for the address of residence for the student.
RETENTION (NON-PROMOTION) CODE	1	A	1	A	The student was retained in the same grade, e.g., Y/N.
SCHOOL NUMBER CURRENT	1	A	4	N	The official school number as assigned by the DOE school facility planning office (HOME SCHOOL).
SCHOOL NUMBER, OTHER CURRENT	1	A	4	N	The official school number (as assigned by the DOE school facility planning office) where other instruction is being received by student.
SCHOOL NUMBER, FUTURE	3	A	4	N	The official school number (as assigned by the DOE school facility planning office) where the student is scheduled to attend following completion of the final grade offered at the current school.

* A handicapped pupil is one who has one or more of the exceptionalities identified in the PROGRAM PARTICIPATION, SPECIAL CODES section of the Appendix (Codes 01-18), regardless of that student's participation in special education programs of the school.

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
SCHOOL NUMBER, PREVIOUS	2	A	4	N	The official school number (as assigned by the DOE school facility planning office) where the student previously attended school.
SCHOOL NUMBER, SUMMER	3	A	4	N	The official school number (as assigned by the DOE school facility planning office) where the student attends during the summer, if different from current school.
SEX	1	A	1	A	The designation as to whether the student is male or female, e.g., M/F.
SHIFT	3	A	1	N	The number of the shift the student attends (for schools on double session or overlap).
SOCIAL SECURITY NUMBER	1	A	9	N	The number assigned to a person by the Social Security Administration.
STATUS INDICATOR	1	X	1	A	Indicates whether a student is active in membership, or inactive, e.g., A/I.
TELEPHONE, EMERGENCY	3	A	7	N	The telephone number which may be used to contact parent(s) or guardian(s) in case of emergency.
TELEPHONE, HOME	3	A	7	N	The telephone number at the student's address, including the area code.
TEST DATE	3	A	6	N	The date a particular test is administered, e.g., MM/DD/YY.
TEST FORM	3	A	1	A	A standard code utilized to indicate the form of test where applicable. Normally this code will be provided by the test publisher in a single alpha character format. Where other than a single alpha character format is designed by the publisher, codes will be designed by the using district or districts.
TEST LANGUAGE	3	A	2	A	The language in which a test was administered. Utilize values found under "PRIMARY LANGUAGE CODE."
TEST LEVEL	3	A	2	N	The standard test level code established by the test publisher, e.g., 01-99.
TEST NAME CODE	3	A	5	N	The standard code which represents the official name of the test. See attachment for "MSRTS TEST LIST 06/25/81."
TEST PURPOSE	3	A	2	N	The primary purpose or reason a test was administered. 01 Ability 03 Achievement 05 Admission 07 Advancement 09 Aptitude 11 Attitude 13 Basic Skills 15 Curriculum Development 17 Diagnosis 19 Graduation 21 Literacy 23 Placement 25 Pretest, Program 27 Pretest, Student 29 Postest, Program 31 Postest, Student 33 Psychomotor 35 Selection 99 Other
TEST SCORE (CONVERTED)	3	A	2	N	The score obtained on a test converted to a meaning statistic for comparison purposes and in the form of the converted score indicated in the element "Test Score Type," shown below.
TEST SCORE TYPED	3	A	1	N	A code used to identify the type of converted score which defines the statistic shown in the "Test Score (Converted)," above. 1 Grade Equiva- 2 I.Q. 3 Mental Age 4 NCE 5 Percent 6 Percentile 7 Raw Score 8 Scale Score 9 Standard Score 0 Stanine

STUDENT/PROGRAM DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
TEST - SUBTEST CODE	3	A	3	N	A standard code which indicates a specific subtest, standard or skill of a particular test. Codes to be established by using district, by a consortium of using districts, or by State Department of Education; depending upon who has prime utilization of test. The three character numeric allows for up to 999 subtests, standards, or skills.
TRANSPORTATION ELIGIBILITY	1	A	1	N	A code that indicates whether the student is eligible for transportation at public expense. 1 Not eligible 2 Eligible because of distance (2 or more miles from school). 3 Eligible because of handicap 4 Eligible because of other reasons, e.g., hazardous highway conditions. *Note: Keys may need to be provided for indication of joint-use/non-student riders.
TUITION	3	A	2	A	If required, this code indicates if the student has paid a tuition fee, e.g., Y/N/NA.
VEDOS, ACADEMIC DISADVANTAGE CODE (A)	1	A	1	A	A student who meets any of the following criteria should be classified as academically disadvantaged: student is enrolled in remedial instruction either in reading, writing, or mathematics; or student is performing below grade level on standardized tests; or student is failing a grade; and for adults, or student is on academic probation, e.g., Y/N.
VEDOS, CLASS HOURS	1	A	3	N	The total number of whole hours the class meets from the class beginning date through the class ending date in one school year.
VEDOS, CLASS INTENT CODE	1	A	1	A	Indication of class as Preparatory or Supplemental, e.g., P/S.
VEDOS, ECONOMIC	1	A	1	A	A student who meets the following criteria should be classified as economically disadvantaged: student's family income is at or below national poverty level; or student or parent or guardian of the student is unemployed; or student or parent or guardian of participant is recipient of public assistance; or student is institutionalized or under State guardianship e.g., Y/N.
VEDOS, INSTRUCTIONAL SETTING CODE	1	B	1	A	M Setting in which student with special needs and student without special needs are integrated in the same instructional setting and added support services are provided with Fed. Voc. Ed. funds S Setting in which enrollment is exclusively students with special needs.
VEDOS, OCCUPATIONAL PGM CODE	1	A	4	N	4-digit number as assigned by DVE-See instructions for ESE 424.
VEDOS, PROGRAM/COURSE LENGTH	1	B	4	N	The normal length of the program with which the class is associated as defined by DVE.
VEDOS TERMINATION CODE	1	A	2	A/N/L	A code that indicates the completion status of a student at the time of termination from the vocational program. X This code indicates that: (a) This code is a fundamentals course (b) This course is a Work Experience course (course number 3640) (c) This course is a Consumer and Homemaking course in the 2600 course number series (2601 through 2699)

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
VEDOS TERMINATION CODE CONTINUED					(d) This course is an Individualized Manpower Training System (IMTS) course (course number 8590) (e) This student is an Adult Vocational Supplemental student having a grade level of 15. C This code indicates that student is a program completer, when he or she has finished a planned sequence of courses or competencies designed to meet a vocational occupational objective. This person must have met all the requirements of the institution for program completion whether or not he or she graduated from institution. A student completing a FUNDAMENTALS course must not be classified as a completer, but must be reported using an "X" termination code as defined above. L1 This code indicates that the student is known to be a program leaver who has completed more than 50 percent of the required program competencies. A student is a program leaver if he or she attended a vocational educational program and LEFT THE PROGRAM AND INSTITUTION WITHOUT COMPLETING THE TOTAL PROGRAM. L2 This code indicates that the student is known to be a program leaver who has completed 50 percent or less of the required program competencies. A student is a program leaver if he or she attended a vocational educational program and LEFT THE PROGRAM AND INSTITUTION WITHOUT COMPLETING THE TOTAL PROGRAM. T1 This code indicates that the student is known to have transferred from this vocational program to a different vocational occupational program within the same institution. T2 This code indicates that the student is known to have transferred out of this vocational program into a non-vocational educational (academic) program at the same institution T3 This code indicates that the student is known to have transferred out of this vocational program to another institution. R1 This code indicates that this student is expected to return and continue in the same occupational program after the class, and at the time of this final class report has completed 50 percent of the required program competencies. R2 This code indicates that this student is expected to return and continue in the same occupational program after this class, and at the time of this final class report has completed 50 percent or less of the required program competencies.
WITHDRAWAL CODE	I	A	2	A/N	An indicator to designate reason for student withdrawal. W1 Student promoted or transferred to another room or attendance register in the same school. W2 Student promoted or transferred to another public school in the district. W3 Student withdrawn to attend public school located outside the district. W4 Student withdrawn to attend a non-public school. W5 Student issued an employment certificate or age certificate, or a student over compulsory attendance age who is known to have dropped out of school. W6 Student graduated from high school. W7 Student issued a certificate of exemption or who has withdrawn for other unspecified reasons. *Note: Any local codes may be added to this field.
WITHDRAWAL DATE	I	A	6	N	Date of withdrawal, e.g., MM/DD/YY.

STAFF DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
ACTIVITY ASSIGNMENT	1		5	A/N	A code which refers to a description of the activities assigned to a staff member.
ADDRESS, MAILING	3		46	A/N	Number, direction, street name and room or apartment number or post office box or rural route and box number - 22 characters/city -19 characters/zip code - 5 characters.
BARGAINING UNIT	3		2	A/N	The unit to which a staff member is affiliated for the purpose of collective bargaining.
BILINGUAL ABILITIES	3		6	N	A code which indicates a staff members proficiency in languages other than english. See Table 9.
BIRTH DATE	2		6	N	The month, day and year on which a staff member was born. The format is MMDDYY.
BIRTH PLACE	3		22	A/N	If foreign born, indicate country, if not, city and two character abbreviation of state as approved by USPS regulations. See Table 8.
CERTIFICATE TYPE	1		1	A	The type of teaching certificate issued to the staff member by the Florida Department of Education. R - Regular T - Temporary
CERTIFICATE, EDUCATION LEVEL	1		2	A	Highest acceptable education level as assigned by the certification section of the Florida Department of Education. BA - Bachelors Degree MA - Masters Degree SP - Specialist Degree ED - Doctorate
CERTIFICATE, EXPIRATION YEAR	1		2	N	Year in which the staff members teaching certificate, issued by the Florida Department of Education, expires.
CERTIFICATE, STATE DEPT. EDUCATION NUMBER	1		6	N	The identifying number, as it appears on a staff members teaching certificate.
CERTIFICATION AREAS	1		30	N	The functional areas as they appear on a staff members teaching certificate, within which the staff member is certified. See Table 6.
CONTACT PERSON ADDRESS	1		46	A/N	The official mailing address of the staff member who has been designated as the contact person to one or more of the the Education Programs.
CONTACT PERSON NAME	1		27	A	The name of the person designated as district liaison in matters pertaining to an Education Program. 1-16 Last Name 17-26 First Name 27-27 Middle Initial
CONTACT PERSON TELEPHONE	1		13	N	The office telephone number of the staff member designated as the contact person for one or more Education Programs. 1-3 Area Code 4-10 Phone Number 11-13 Extension
CONTRACTUAL STATUS	3		1	N	A code which represents the type of contract under which the staff member is serving the local education agency. 1 - Annual Contract 2 - Multi-Year Contract 3 - Continuing Contract 4 - Volunteer/No Contract 5 - Other Agreement

STAFF DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
COST CATEGORY	1		2	N	Code which indicates the FEFP category for each activity assignment of the staff member. See Table 4.
CURRENT ASSIGNMENT, BEGINNING DATE	2		6	N	Month, year and day on which the staff member's current assignment began. The format is MMDDYY.
CURRENT ASSIGNMENT, DAYS PER YEAR	3		3	N	The number of days per year required by the staff member's current assignment.
CURRENT ASSIGNMENT, HOURS PER DAY	3		3	N	The number of hours per day required by the staff member's current assignment.
CURRENT ASSIGNMENT, MONTHS PER YEAR	3		3	N	The number of months of work per year required by the staff member's current assignment.
CURRENT ASSIGNMENT, YEARS	1		2	N	The total number of years that the staff member has been functioning in their current assignment.
DEGREE DATE EARNED	3		4	N	The month and year in which the staff member earned their most recent degree/certificate.
DISTRICT NUMBER	1		2	N	The code, assigned by the Florida Department of Education to identify each of the 67 public school districts and 5 special educational institutions. See Table 1.
EMPLOYMENT STATUS	3		1	N	A code which reflects the circumstance under which the staff member serves the district. 1 - Probationary 2 - Temporary 3 - Tenure 4 - Tenure in other position 5 - Other
EMPLOYMENT, BEGINNING DATE	1		6	N	The month, day and year when the staff member first entered into employment with the district. The format is MMDDYY.
EXEMPTIONS, NUMBER CLAIMED	3		2	N	The total number of exemption and allowances claimed by the staff member for Federal Income Tax purposes, in accordance with IRS definitions and rules.
EXPERIENCE, TOTAL APPLICABLE YEARS	1		2	N	The total number of years of employment with educational professions that can be applied for payroll purposes.
EXPERIENCE, YEARS IN DISTRICT	2		2	N	The total number of years that the staff member has been employed in the school district.
FISCAL YEAR	1		2	N	A 12 month period of time to which the annual budget applies. The terminal two digits of the calendar years designates the code i.e., FY 1981-82 is 82.
FLORIDA TRAINED TEACHER	2		1	A	Indicator of whether or not the teacher was trained and obtained teacher prep degrees in only Florida institutions. Y - Yes, Florida N - No, Other.
FULL-TIME EQUIVALENCY	1		3	N	Indicates the percentage of duty time spent by the staff member for each program assignment by activity. For example 60% would be coded 060.
FUNCTION	1		4	N	An accounting element that interrelates with the element "Activity Assignment" to define the action/purpose of a staff member. Function includes the activities which are performed to accomplish the objectives of the enterprise. See Table 3.
FUND	1		3	N	An independent fiscal and accounting entity with its own assets, liabilities, reserves and fund balances which are segregated for the purpose of conducting specific activities of a school district in accordance with special regulations, restrictions or limitations. 100 - General Fund 400 - Special Revenue Fund

STAFF DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
GRADE ORGANIZATION	1		2	N	Code which identifies grades offered in a school. See Table 5.
HEALTH INSURANCE, EFFECTIVE DATE	3		6	N	The month, day and year on which the staff member's health insurance coverage began. The format is MMDDYY.
HEALTH INSURANCE, ELIGIBILITY	3		1	A	Indicates whether or not the staff member is eligible for health insurance Y - Yes, Eligible N - No, Not Eligible
IDENTIFICATION NUMBER, OTHER	3		-	A/N	A number assigned to staff members by the local district for record keeping purposes such as payroll, insurance, etc. The domain and range are defined by the local district.
INSERVICE ACTIVITY ASSIGNMENT	1		2	N	Indicator of type of activity assignment this staff member is assigned to work in the staff training program. See Table 7.
INSERVICE COMPLETION DATE	3		6	N	The date of completion of the particular inservice component by the staff member. The format is MMDDYY.
INSERVICE COMPLETION TYPE	2		1	A	A code reflecting the status of completion of the particular inservice component by the staff member. S - Satisfactory U - Unsatisfactory
INSERVICE COMPONENT LENGTH	1		3	N	The number of clock hours spent by the staff member in the "Inservice Component Number." A full day is equated as six hours and a half day is equated as three hours.
INSERVICE COMPONENT NAME	2		25	A	The name of the component corresponding to the element "Inservice Component Number". District generates description.
INSERVICE COMPONENT NUMBER	2		7	N	The number of the district inservice component completed by the staff member. 1-1 Function 2-3 Subject/Service Area 4-5 Sequential Number 6-6 Inservice Content 7-7 Special Program
INSERVICE POINTS EARNED	2		13	N	The number of inservice points earned by the staff member in the particular inservice component broken into six categories. The format follows. 1-3 Infield Points 4-6 Administrative Points 10-12 Special Education Points 13-15 Basic Skill Points 16-18 Other Points
ITINERANT	1		1	A	Indication of whether or not a full-time staff member is assigned to work in two or more schools on a part-time basis in each school.
LEAVE, ADMINISTRATIVE	3		9	N	A leave category that is not accumulated and accounted for only as it occurs. The quantities are expressed in hours. 1-3 Leave Without Pay 4-6 Government Requested Leave 7-9 Jury/Witness Duty
LEAVE, PERSONAL	3		4	N	Leave permitted to staff members for personal reasons, including emergency circumstances. Personal leave is usally charged against accumulated sick leave. The four positions are broken down into two subfields of 2 characters each. The quantity is expressed in hours. 1-2 Fiscal Year-To-Date Used 3-4 Accumulated Balance

STAFF DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
LEAVE, SICK	3		8	N	Leave permitted to staff members for personal and immediate family illness or death. The element is divided into two subfields and is expressed in hours. 1-4 Fiscal Year-To-Date Used 5-8 Accumulated Balance
LEAVE, VACATION	3		6	N	Leave which may be taken during the fiscal year for personal vacation. The element is divided into two subfields and is expressed in hours. 1-3 Fiscal Year-To-Date Used 4-6 Accumulated Balance
MARITAL STATUS, TAX	3		1	N	Indicates whether the staff member is married or single for purposes of computing federal withholding tax. 1 - Single 2 - Married
NAME, LEGAL	1		27	A	The legal name as it appears on the staff members social security card in the following format. 1-16 Last Name, including any appendage such as "Jr." or "III". 17-26 First Full Name 27-27 Middle Initial
PAY LOCATION	3		4	N	A school/department number used to identify where within the district the staff member is assigned for payroll attendance accounting and check distribution.
PAY RATE, ANNUAL	1		8	N	The amount of money, before deductions, expected to be paid to the staff member during the current fiscal year. If a 10 month employee is employed for the summer term, a separate entry should be made to indicate this.
PAY RATE, DAILY	3		5	N	The amount of money, before deductions, to be paid to the staff member for each day during the current fiscal year.
PAY RATE, HOURLY	3		5	N	The amount of money, before deductions, to be paid to the staff member for each sixty minutes work.
PAY RATE, MONTHLY	3		7	N	The amount of money, before deductions, to be paid to the staff member for a months work.
POSITION NUMBER	3		-	A/N	The number assigned to a specific position. This number is used to designate the position type, category, etc., and is to be determined by the district.
PROJECT	2		4	A/N	The smallest accounting segment of a program that is separately recognized in the records, accounts, and reports. This element is used to account for expenditures on federal contracts, categorical aids, and construction projects and is used to interrelate staff activities to a program and/or its costs. The code is to be determined by the district.
RACIAL/ETHNIC CATEGORY	1		1	A	The racial/ethnic origin of the staff member according to the classifications herein. W - White, Not of Hispanic Origin. B - Black, Not of Hispanic Origin. H - Hispanic, of Spanish Culture/Origin. A - Asian or Pacific Islander. I - American Indian or Alaskan Native.
SCHOOL NUMBER	1		4	N	The code assigned to the school by the Office of Educational Facility, Florida Department of Education as found in the master school ID file. The district has the option to further define county level departments.
SEPARATION DATE	1		6	N	The month, day and year on which the staff member's employment terminates. The format is MMDDYY.

STAFF DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
SEPARATION TYPE	1		1	N	The code that reflects the reason for severance of the employment relationship between the staff member and employer. 0 - Voluntary Separation/Resignation 1 - Involuntary Separation/Termination 2 - Separation by Mutual Agreement 3 - Separation by Death 4 - Retirement 5 - Lay-Off Due to Personnel Cutback 6 - Other
SEX	1		1	A	Designation as to the gender of the staff member. F - Female M - Male
SOCIAL SECURITY NUMBER	1		9	N	The identifying number, as it appears on staff members social security card for payroll deductions of FICA and Federal Withholding Tax.
SUPPLEMENT, ANNUAL SALARY	1		7	N	The amount of money, before deductions, expected to be paid to the staff member for additional assigned duties during the current fiscal year.
TELEPHONE NUMBER, RESIDENCE	3		7	N	Telephone number of the residence where staff member may be contacted.
WITHHOLDING, ADDITIONAL PER PAY PERIOD	3		3	N	The dollar amount, per pay period, of additional federal tax deducted from the staff members paycheck or voucher. The deduction is by employee request.

FINANCE DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
ACTIVITY	1	-	2	N	Job classification assignment based upon the function performed.
AMOUNT	1	-	12	N	A number of dollars and cents
AMOUNT OF ASSESSED VALUATION OF PROPERTY	1	-	12	N	The value of all real estate, personal, and railroad property on which school taxes are levied as determined by the county property appraiser.
AMOUNT TYPE	1	-	9	N	A qualification of amount.
ASSETS	1	-	4	N	The things of value a district owns including current assets, fixed assets, and budgetary and other debits.
BATCH NUMBER	3	-	2	N	A number assigned to a set of input data.
BID NUMBER	3	-	4	A/N	The school district number assigned to the competitive request for goods and services.
BIN LOCATION	3	-	3	A/N	Specified area assigned to a group of like items in the warehouse.
CHECK NUMBER	3	-	6	N	The sequential number for a draft or negotiable demand drawn on a bank and payable on demand.
CREDIT MEMORANDUM NUMBER	3	-	10	A/N	The number for a notice of funds due to be returned to the school district.
DATE OF TRANSACTION	3	-	6	N	The date a transaction is recorded.
EXPENDITURE FUNCTION	1	-	4	N	The broad areas of programs and activities into which expenditures are classified indicative of the action taken by a person or the purpose for which a thing exists or is used.
EXPENDITURE OBJECT	1	-	3	N	The service of commodity obtained from a specific expenditure.
FISCAL	1	-	2	N	The year of the last month of the twelve month period used for financial accounting.
FUND	1	-	3	N	An independent fiscal and accounting entity with its own assets.
INVOICE NUMBER	3	-	10	A/N	The number assigned by the vendor on the request for payment for the itemized list of goods or services purchased by the school district.
JOB NUMBER	3	-	6	A/N	The number assigned to a maintenance or construction project.
JOURNAL ENTRY NUMBER	3	-	6	N	The number for the record of a financial transaction in its appropriate book of accounts.
LIABILITIES, RESERVES, AND FUND BALANCES	1	-	4	N	Debt and other legal obligations, including current and long-term liabilities, budgetary and other credits, reserves, and fund balances.
MILLAGE RATE	1	-	7	N	The millage, expressed in dollars per thousand of assessed value or in mills per dollar of assessed value, levied on the non-exempt assessed valuation of the property subject to school taxes.
MILLAGE RATE TYPE	1	-	2	N	A qualification of millage rate.
NUMBER, DISTRICT	1	-	2	N	The two digit identification number assigned to each of Florida's 67 public school districts, plus some special educational institutions.
PRESENT BONDED INDEBTEDNESS LIMIT	1	-	2	N	The limit of a school district's bonded indebtedness.
PROGRAM, LOCAL	3	-	4	N	Program as defined by the school district.
PROJECT	1	-	4	A/N	The smallest segment of a program that is separately recognized in the records, accounts, and reports for the purpose of identifying expenditures within function, object, program, or school.

FINANCE DATA ELEMENTS

ELEMENT NAME	USE	TYPE	NUMBER OF CHARACTERS	FIELD TYPE	DEFINITION
PURCHASE ORDER NUMBER	3	-	8	A/N	The number for a written request to a vendor to provide material or services.
QUANTITY	3	-	4	N	The number of units of measure.
QUANTITY STATUS	3	-	2	N	The process category of the number of units of measure.
REQUISITION NUMBER	3	-	6	N	The number for a written request to a district purchasing agent.
REVENUES	1	-	3	N	Federal direct, federal through state, state, and local revenue; remittance; transfers; and non-revenue receipts.
SCHOOL NUMBER	1	-	4	N	A four digit number assigned to a school by the Office of Educational Facilities Construction in the Department of Education.
STAFF SALARY SCHEDULES	1	-	3	N	The Board of Education approved schedule for staff compensation.
STATE PROGRAM	1	-	2	N	Program cost categories as defined by Florida Statutes, Section 236.081.
STOCK NUMBER	3	-	6	N	The number assigned to each group of like items in inventory.
TYPE OF ASSESSED VALUATION OF PROPERTY	1	-	2	N	A qualification of assessed valuation of property.
UNIT OF MEASURE	3	-	4	A/N	Volume, quantity, or weight upon which pricing is based.
UNIT PRICE	3	-	8	N	The cost of a single item or of a unit of measure of an item.
VENDOR ADDRESS	3	-	30	A/N	Address (street, city, state, and zip code) of person or firm providing goods or services for school districts.
VENDOR NAME	3	-	25	A/N	Name of person of firm providing goods or or services for a school district.
VENDOR NUMBER	3	-	10	A/N	A number designating a person or firm providing goods or services for the school district.
VOUCHER NUMBER	3	-	6	N	The number for a document which authorizes the payment of money.
WAREHOUSE NUMBER	3	-	2	N	A number denoting a specific warehouse.

THE FACILITY AND COMMUNITY DATA DICTIONARY DIRECTORIES ARE CURRENTLY BEING REVISED AND WERE NOT AVAILABLE AT THE TIME THIS PLAN WENT TO PRESS.

STATE UNIVERSITY SYSTEM OF FLORIDA
RECOMMENDATION FOR AN EDUCATIONAL COMPUTER NETWORK

During January of 1980, the Board of Regents, Management Information Systems office established a network technical committee comprised of the associate directors of each of the State University System (SUS) regional data centers, and charged it with the identification of the next step to be taken by the existing SUS computer network. This group reviewed the history of the current facility, its limitations, positive factors and anticipated needs for the future. The committee first determined that the IBM System Network Architecture (SNA) portion of the facility should be retained and enhanced. How to accomplish this and add the features that SNA lacked or did not perform well was the issue at hand. In addition, this group felt strongly that the end product must be capable of evolving into a statewide facility for all Florida educational entities and possibly for all state government agencies. Thus, representatives from the Department of Education and Department of General Services were asked to join in the deliberations and proceedings.

Visits by the committee to IBM's Raleigh and Univac's Salt Lake City communications headquarters proved that the vendors were thinking in similar terms, but were not yet prepared to present an effective homogeneous solution. It was deemed that a formal Request for Information (RFI) document, to be released to the vendor community, would be of great benefit in telling what the state of the art in communications could offer. The RFI was developed so that it contained all of the functions and features that were identified as requirements by the Committee. It also contained a requirement for system-to-system communications that was identified by the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida. This instruction and research need greatly enhanced the requirements in terms of supporting a wide variety of equipment types all over the state and gave credence to the idea of having an international standard communications protocol co-existing with the SNA environment. After considerable effort, this document was finalized in late December, 1980 and issued to sixteen computer and communications vendors on December 30, 1980.

On March 3, 1981, the SUS received eight formal responses to this document. The committee found that only four of these responses were complete. It was deemed that each of these four should be asked for an oral presentation on how they would configure and install a pilot project between Miami, Gainesville, and Tallahassee. This pilot would be on a one-year lease and would be used to test out all desired features and functions. At the end of the one-year term, the SUS would have the option of purchasing and expanding this solution or start seeking other alternatives. In any event, the capabilities of the solution

would be a known factor before fully committing to a long term, expensive investment.

The four vendors were scheduled for presentations on April 21 and 22, 1981. During these two days of intensive evaluation, the committee found that only two were acceptable. While there were still numerous questions on the solutions presented, it was obvious that:

1) At least two vendors could provide the functions, features and interfaces necessary for the next step in the SUS network.

2) Both acceptable vendors use the international standard packet switching protocol X.25.

3) Access to public data networks was possible and could be of great benefit.

4) Such a solution could be the foundation for an educational network in Florida and could possibly be expended to serve all of Florida government.

5) It was determined that the pilot could be performed on a one-year lease by both vendors. It is the recommendation of this technical committee that steps be taken to acquire such a solution.

(Copies of the RFI and evaluation performed by the Committee, or information on the features and functions covered may be obtained from the BOR/MIS office, phone 904/488-6030.)

Appendix F
Proposed Procedure
December 21, 1981

FLORIDA DEPARTMENT OF EDUCATION

REVIEW AND APPROVAL OF FLORIDA DEPARTMENT OF EDUCATION DATA COLLECTION ACTIVITIES DISTRIBUTED TO FLORIDA SCHOOL DISTRICTS

Management Information Services
Division of Public Schools

REVIEW AND APPROVAL PROCEDURE FOR
FLORIDA DEPARTMENT OF EDUCATION
PATH COLLECTION ACTIVITIES DISTRIBUTED TO
FLORIDA SCHOOL DISTRICTS

1.0 Statutory Authority

This procedure implements the provisions of Chapters 120 and 229, Florida Statutes which address state education agency data collection activities. Section 120.53, Florida Statutes, requires the Department of Education to establish rules of practice for adopting or modifying agency rules. A rule is defined in section 120.52(14) Florida Statutes to include any form which imposes any requirement or solicits any information not specifically stipulated in statute or existing rule. As part of its adopted rules of practice, the Department must list all forms (or the equivalent) which school districts are required to complete. (See section 6A-1.011, of the Florida Administrative Code).

Section 229.555 (2)(a)12. Florida Statutes, directs the Commissioner of Education to initiate a "reports and forms management system to ascertain that duplication in collection of data does not exist and that forms and reports are prepared in a logical and uncomplicated format, resulting in a reduction in the number and complexity of required reports, particularly at the school level".

2.0 Department Policy

All data collection activities distributed to school districts must be submitted for review and approval according to the following procedure. Data collection activities will be reviewed by the MIS section of the Division of Public Schools and by the Data Review Committee of the School District Council on Comprehensive Management Information Systems.

2.1 Data Collection Activity Defined

A data collection activity is any manual or automated procedure or device, together with its instructions or documentation, which requests school districts to collect, maintain, or report information or data elements. Data collection activities include forms, telephone surveys, memoranda, interviews, magnetic tapes or other data communications methods.

3.0 Review and Approval Procedure and Criteria

Review and approval of Department of Education data collection activities may be initiated by either the program sponsor or by the MIS section. The review and approval process is contained in sections 3.1 through 3.6.

3.1 Scheduling Data Collection Activities for Review

Department of Education data collection activities which are intended for Florida public school districts must be submitted for review according to the schedule below. (Provisions for emergency review are given in subsection 3.2).

Anticipated Distribution Dates	Received in MIS Section No Later Than Last Workday of	MIS Review Completed by Last Workday of	Data Review Committee Action
July 1-Sept. 30	December	January	2nd Week-Feb.
Oct. 1-Dec.31	March	April	2nd Week-May
Jan. 1-March 31	June	July	2nd Week-Aug.
April 1-June 30	September	October	2nd Week-Nov.

3.2 Emergency Review

Those requests that cannot be accommodated by the above schedule will be reviewed on an individual basis with the prior written approval of the Director of the Division of Public Schools for Division of Public Schools data collection activities, or by the Deputy Commissioner or his designee for data collection activities originating outside the Division. The schedule for emergency review is as follows:

Received in MIS Section No Later Than	MIS Review Completed by	Data Review Committee Emergency Panel Action
Each Friday 12:00 p.m.	Next Monday 1:00 p.m.	Next Friday 2:00 p.m.

3.3 MIS Section Review

The purpose of the MIS review is to determine whether a data collection activity complies with the following criteria.

1. Review Criteria

   (a) Law or existing rule specifically stipulates a data collection requirement.

   (b) Activities or tasks mandated under law or existing rule cannot be accomplished without the data which the activity will collect.

   (c) The data are not presently collected by the Department.

   (d) Cost of developing or modifying departmental data systems, or of school districts collecting, maintaining, or reporting data is justified in relation to state level use.

(e) Format, content, and other special methods and techniques to be used comply with the Data Element Directories.

(f) Format, content, and other special methods and techniques to be used comply with established evaluation guidelines.

2. Review Procedure

(a) The sponsor will prepare and submit to the MIS section, according to the schedule prescribed above, a draft of the data collection activity together with related memoranda, instructions or documentation, a completed or updated MIS Review Sheet, and an estimate of costs to be incurred. Data collection activities which will require new automated data processing support, or which will necessitate a programming change in an existing data processing application, must be accompanied by a written memorandum of approval signed both by the Bureau Chief of the program making the request and by the Chief of the Bureau of Management Systems and Services.

It is recommended that the MIS staff be consulted in the early phases of the development of new or substantially revised data collection activities.

(b) The MIS staff will conduct a technical review of the activity to determine whether it minimally complies with the above criteria. Data collection activities meeting these criteria will be referred to the Data Review Committee along with the recommendations of the MIS section. The MIS staff will assist the department sponsor in preparing for the committee review.

3.4 Data Review Committee

The Data Review Committee is composed of school district personnel nominated by the School District Council on Comprehensive Management Information Systems and appointed by the Director of the Division of Public Schools to review all Department of Education data collection activities intended for school districts. One half of the sixteen member committee is composed of members of the School District Council on Comprehensive Management Information Systems. The remaining membership is drawn from district personnel at large. The committee convenes according to the schedule prescribed in sections 3.1 and 3.2 above, with an agenda prepared by the MIS section. The purpose of the committee is to review

each data collection activity from the perspective of a district respondent and, accordingly, to make recommendations to the MIS section.

1. Recommendation Criteria (In Addition to Criteria of 3.3)

   (a) The requested data are available in existing school district records and can be reported in the manner desired.

   (b) The costs of collecting, maintaining, and/or reporting the data are reasonable in relation to intended state-level use of the data.

   (c) All instructions, documentation, and other reporting requirements are clear and concise.

2. Committee Review Procedure

   (a) The committee will review each data collection activity and make one of the following recommendations:

      (1) Recommend approval without change

      (2) Recommend approval with suggested change(s)

      (3) Recommend approval only with required change(s)

      (4) Not recommended for approval

      (5) Other recommendation

   (b) The department sponsor of the data collection activity should be available to respond to committee questions or concerns. In the event the department sponsor will be unavailable, another staff person should be designated who is knowledgeable about the activity.

3.5 Approval

The department sponsor will be notified, in writing, of the recommendations made by Data Review Committee to MIS section. Those activities which the MIS section and the committee find acceptable will be approved for distribution.

3.6 Appeal

Those data collection activities which are not approved for distribution may be appealed as follows:

1. Division of Public Schools data collection activities - Appeals will be made to to the Director, Division of Public Schools

2. All other Department of Education data collection activities - Appeals will be made to the Deputy Commissioner, Department of Education

XIII. G L O S S A R Y

ASCII Code- The acronym for American Standard Code for Information Interchange. This standardized code is used extensively in data transmission. The code includes 128 upper and lower case letters, numerals, and special purpose symbols each encoded by a unique 7-bit binary number.

Asynchronous communication- A method of transferring data where each character of information is transmitted separately. Each transferred character is preceded by a start bit and followed by a stop bit, permitting the interval between characters to vary.

Baud rate- Synonymous with signal events (bits-per-second or BPS) and used as a measure of serial data flow between a computer and/or communication devices.

Bit- A binary digit. A bit is the smallest unit of data in a digital computer.

Byte- A set of contiguous binary bits, usually eight, which are operated on as a unit. A byte can also be a subset of a computer word.

Central processor unit (CPU)- That unit of a computing system which fetches, decodes and executes programmed instructions and maintains the status of results as the program is executed. The subunits of a CPU typically include Accumulator and Operand registers, instruction logic, arithmetic/logic unit, I/O control logic.

Council- School District Council on Comprehensive Management Information Systems

EBCDIC (Extended Binary-Coded Decimal Interchange Code)- An eight-bit character code used primarily by IBM equipment. This code provides 256 unique bit patterns.

Emulator- A program or a hardware device which duplicates the instruction set of one computer on a different computer, allowing program development for the emulated computer without that computer being available.

FECP- Florida Educational Computing Project

FECN- Florida Educational Computing Network

Firmware- A computer program (software) that is implemented in hardware, such as read-only memory.

FIRN- Florida Information Resource Network

Full duplex- Refers to a communication channel which can simultaneously and independently transmit and receive data.

Half duplex- Refers to a communication channel which can receive and transmit, but not simultaneously.

Hard copy- A printed output message, as opposed to a volatile display on a video terminal.

Large-Scale Integration (LSI)- High-density integrated circuits for complex logic functions. LSI circuits can range up to several thousand transistors on a one-tenth of a square inch silicon chip.

Memory- A general term which refers to any storage media for binary data. Basic memory functional types include read/write and read-only.

Micro-computer- A class of computer having all major central processor functions contained on a single printed circuit board constituting a stand-alone module. Micro-computers are typically implemented by a small number of LSI circuits and are characterized by a word size not exceeding 16 bits, and very low cost, usually under $1,000.

Microprocessor- A single LSI circuit which performs the functions of a CPU. Some characteristics of a microprocessor include small size, inclusion in a single integrated circuit or a set of integrated circuits, and low cost.

Multiprocessing- A processing method in which program tasks are logically and/or functionally divided among a number of independent CPU's, with the programming tasks being simultaneously executed.

Multiprogramming- A programming technique in which two or more programs are operated on a time-sharing basis, usually under control of a monitor which determines when execution of one program stops and another begins.

Network- A structured connection of computer systems and/or peripheral devices, each remote from the others, exchanging data as necessary to perform the specific function of the network.

Node- An end point of a branch in a network, or a junction common to two or more branches in a network.

NERDC- Northeast Regional Data Center

NWRDC- Northwest Regional Data Center

Operating system- A structured set of software routines whose function is to control the execution sequence of programs running on a computer, supervise the input/output activities of these programs, and support the development of new programs through such functions as assembly, compilation, editing, and debugging.

Program- A complete sequence of computer instructions necessary to solve a specific problem, perform a specific action, or respond to external stimuli in a prescribed manner. As a verb, it means to develop a program.

Remote job (batch) entry- The processes of entering data processing jobs or tasks for execution from an input device as a terminal which is remote from the processing computer and connected to the computer by a communication line.

Response time- The time between the initiation on an operation from a computer terminal and the receipt of results at the terminal. Response time includes transmission of data to the computer, processing, file access and transmission of the results to the teminal.

SNA- IBM's System Network Architecture, a combination of hardware and software designed to support full function networking for a wide range of IBM products.

SUS- State University System

Synchronous communication- A method of transferring serial binary data between computer systems or between a computer system and a peripheral device; binary data is transmitted at a fixed rate, with the transmitter and receiver synchronized. Synchronization characters are located at the beginning of each message or block of data to synchronize the flow.

VEDOS- Vocational Education Data on Occupational Students

Word- A set of binary bits handled by the computer as the primary unit of information. The length of a computer word is determined by the hardware design. Typically, each system memory location contains one word.

X.25- This network architecture is the provisional recommendation from the Consultative Committee on International Telegraph and Telephone (CCITT) standards for packet-switched data transmission services.